

SHPAKOVSKIY, V.I.; VIDGOP; L.N.; SAVITSKIY, V.B.

Operation of the Gazli-Ural gas pipeline. Gaz.prom. 6 no.5:37-41
My '61. (MIRA 14:5)

(Gas, Natural--Pipelines)

SHPAKOVSKIY, Vyacheslav Ivanovich; SVATIKOV, M.S., inzh., nauchnyy red.; KHRYASTOV, Yu., red.

[Bukhara-Ural main gas pipeline] Magistral'nyi gazoprovod Bukhara-Ural; iz opyta proektirovaniia. Moskva, VNIIST GLAVGAZA SSSR. Red.-izdat. otdel, 1961. 36 p. (Opyt proektirovaniia magistral'nykh truboprovodov, no.1)
(MIRA 16:6)

1. Glavnyy inzhener proyekta instituta "Giprospetsgaz" (for Shpakovskiy).

(Gas, Natural--Pipelines)

SMIRNOV, K.P. (SMIRNOV, K.P.)

Construction of the Siberian gas pipeline. Gaz. prom. 9 no.8:
11-15 '64. (MIRA 17:9)

SHPALDON, Frzntishek, prof., doktor inzh. (Koshitsa, Chekhoslovatskaya
Sotsialisticheskaya Respublika)

"Practice of nonferrous and rare metal ore dressing; vol. 2"
by D.S. Sobolev, M.A. Fishman. Reviewed by Frantishek
Shpaldon. TSvet. met. 34 no.8:86-87 Ag '61. (MIRA 14:9)
(Nonferrous metals) (Ore dressing)
(Sobolev, D.S.) (Fishman, M.A.)

OSIPOVICH, Filipp Abramovich; SHPALENSKIY, M.A., redaktor; KAN, P.M., redaktor;
BEGICHEVA, M.N., tekhnicheskii redaktor

[Technique of repairing ship's machinery; mechanical engineering]
Tekhnologiya remonta sudovykh mekhanizmov; mekhanicheskaya obrabotka.
Moskva, Izd-vo "Rechnoi transport," 1955. 303 p. (MIRA 9:3)
(Ships--Maintenance and repair)

RUL'KOV, Dmitriy Ivanovich; SARATOV, Vladimir Fadeyevich; ~~SHPALENSKIY, M.A.,~~
red.; ALEKSEYEV, V.I., red.izd-va; KUZ'MIN, G.M., tekhn.red.

[Navigation marks, lights, and signaling on inland waterways]
Znaki sudokhodnoi obstanovki i signalizatsiia na vnutrennikh
vodnykh putiakh. Moskva, Izd-vo "Rechnoi transport." 1958.
202 p. (MIRA 12:2)
(Merchant marine--Signaling) (Ships' lights)

KHARITONOV, Leopol'd Georgiyevich, dots., kand. tekhn. nauk;
SHPALENSKIY, M.A., inzh., retsenzent; FEDOROV, G.N.,
inzh., retsenzent; FRID, L.I., inzh., red.; BODROVA,
V.A., tekhn. red.

[Shipbuilding materials] Sudostroitel'nye materialy.
Moskva, Izd-vo "Rechnoi transport," 1963. 260 p.
(MIRA 16:6)

(Shipbuilding materials)

ZLATKIN, Valentin Petrovich; TISHCHENKO, Sergey Yakovlevich;
SHPAKOVSKIY, V.I., nauchnyy red.; DESHALYT, M.G., ved. red.;
SAFRONOVA, I.M., tekhn. red.

[Practice in constructing gas mains under conditions present in
the northwestern U.S.S.R.] Opyt stroitel'stva magistral'nykh ga-
zoprovodov v usloviyakh severo-zapadnykh raionov SSSR. Leningrad,
Gostoptekhnizdat, 1962. 144 p. (MIRA 16:3)
(Russia, Northwestern--Gas natural--Pipelines)

SMIRNOV, K. K.; SHPAKOVSKIY, V. I.

"The construction of gas transmission pipeline Bukhara - Urals."

Report to be submitted at the 9th Intl. Gas Conference, ^{the} Hague,
1-4 Sept 1964.

SMIRNOV, K. K. and SHPAKOVSKIY, V. I.

"Construction of the Bukhara-Urals Natural-Gas Main".

Report submitted for the Ninth International Gas Conference, The Hague (Scheveningen)
1-4 Sept. 1964

1. SHPAL'VOY, V.
2. USSR (600)
4. Radio, Short-Wave
7. Short wave section of the Dnepropetrovsk Radio Club of the Volunteer Society for Assistance to the Army, Aviation and Navy. Radio no. 12, 1952.

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

ПРОЕКТИРОВАНИЕ, 4.14, лист.

Using three-dimensional thin-walled roofs for small-size
buildings on mine surfaces. Snazot. ser. 9 no. 6: 12-14
32 165. (MIRA 18:7)

I. I. Chetkiy Promstroymiprojekt.

60/4978

USGR/Biology
Photography

Jul/Aug 48

"Photography of Small Objects With the FED Camera,"
A. P. Terent'yev, V. A. Shpanner, 5 pp

"Byul Mosk Obshch Ispytat Prirod, Otdel Biol"
Vol LIII, No 4

Describes how "Fokrad" (a camera) consisting of a frame-
ing cylinder which is combined with a lens attach-
ment to simplify considerably the photographing of
various objects on a 1:1 or 1:2 scale. The "Fokrad"
is of simple construction, and is expected to greatly
expand the applications of the FED camera in zoology,

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USGR/Biology (Contd)

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botany, and other sciences. Shows several examples
of the camera's capabilities, with sketches of the
camera and attachments.



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SHPANER, V. A.

FOMICHEVA, A., chertezhnitsa (Tula); SERDYUK, tekhnolog; KHARCHENKO, K., slesar'-lekal'shchik; ZUBOVA, Ye., inzh. (G. Krasnyy Luch, Luganskoy oblasti); SHPANNER, B., inzh. (G. Krasnyy Luch, Luganskoy oblasti); GIDON, L., inzh. (Moskva) Avramova, L., apparatchitsa, (g. Lisichansk)

Our readers' comments on work nominated for Lenin Prizes. Sov. profsoiuzu 17 no.6:31-32 Mr '61. (MIRA 14:3)

1. Tul'skiy zavod "Shtamp" (for Serdyuk). 2. Kirovskiy zavod, Leningrad (for Kharchenko).

(Lenin Prizes)
(Russian literature)

3387 SHPANGENBERG K. R.

„Yelektronnyy Lampy. Per. s angl. (sokr.) Pod red. S. A. Obolehskogo. M.,
Sov. Radio 1954 23 sm art ukazan v predisl.

2. Period L. S. Yakovlevoy. 420 s. s. ill. 19R 10K V per. Bibliogr. v
kontse glav - (54-57880) 1.

SOV/99-59-7-8/9

30(1)

AUTHOR: Shpanin, G. I., Engineer

TITLE: Consumption of Main Collector Discharge of the Irrigation System

PERIODICAL: Gidrotekhnika i Melioratsiya, 1959, Nr 7, pp 50-54 (USSR)

ABSTRACT: The function of the main collector consists of removing the surplus of subsurface water accumulated under the ground of tilled acreage. In order to determine consumption of the main collector it is, first of all, necessary to establish connection between the amount of water used for irrigation - and flushing of the sown area, for one thing, and the volume of subsurface water, for another thing, where the natural features of the land in question are to be taken into account. The main sources for formation of subsurface water are irrigation and flushing waters; the volume of subsurface water accumulated under the ground and the height of its water table are in direct conformity with the amount of water used for irrigation and other processes encountered in land reclamation. In determining the amount of water that

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Consumption of Main Collector Discharge of the Irrigation System

serves for the formation of subsurface water, two cases are to be envisaged: 1) The period of salted soil flushing when a part of the land remains fallow, the other part is utilized as sown area, and the third part is flushed and subsequently drained. The area under flushing occupies on the average 15-20% of the total land area; 2) The other period is when the whole irrigated land surface is utilized for cultivation. On the basis of the average monthly consumption of irrigation water used in a given area, the volume of water penetrating underground is figured out. To this amount are added the flushing water as well as infiltration water coming from other sources such as rivers, streams, etc. On the other hand, the natural consumption of surface water and the subsequent lowering of its water table are chiefly due to absorption by plants; it is assumed that evaporation from the surface does not affect much the lowering of the subsurface water level. Having determined the volume of subsurface water that should be removed from the sown area, consumption of the main drain-

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Consumption of Main Collector Discharge of the Irrigation System

ing collector can be worked out. Experience has shown that subsurface water enters into the collector regularly and independently from the irrigation water. Put another way, the subsurface water outflow into the draining system represents a direct function of time. There are 5 graphs and 1 table.

ASSOCIATION: Azgiprovodkhoz

Card 3/3

SHPANIR, A., referent.

New Nerton drawbenches (From "Wire Industry" March 1954) Stal' 16
no.4:380 Ap '56. (Wire) (MIRA 9:9)

SHPANIR, A.
SHPANIR, A.

Mechanical removal of dross. (From foreign journals), Stal'
16 no.7:665-667 J1 '56. (MLRA 9:9)

(Foundry machinery and supplies)

SHPANIR, A.

Effective way of preheating the galvanizing bath. Stal'
16 no.7:667 J1 '56. (MLRA 9:9)

(Galvanizing)

S/135/60/000/010/012/015
A006/A001

AUTHORS: Kheyfits, D. P., Engineer, Barreras, B., Morozov, A. F., Shpan'ko,
G. F., Technicians

TITLE: A Modernized Burner for Welding Thin Metal in Carbon Dioxide¹⁸

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 10, p. 32

TEXT: A simplified design of a burner for welding in carbon dioxide was developed on the basis of the TsNIITMASH burner and introduced at the Moscow "Gidrooborudovaniye" experimental machine-plant. The burner has the following particular features: 1. Non-ferrous metal parts were partially eliminated; 2. The cooling system was improved thus preventing scorching of the interchangeable burner; 3. The burner has a lighter weight, facilitating its operation. The burner nozzle is made of M1 copper and cooled by running water, circulating between the nozzle and a bushing soldered to it. For the in- and outflow of water to the nozzle copper pipes are used. The carbon dioxide gas enters the welding area through 4 apertures in the ДШ5 (DSh5) holder tip. The nozzle is fixed by a disk and a nut, insulated with asbestos cement gaskets. An exchangeable tip from the ДШ-5(DSh-5) holder is used in the burner. The carbon

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A006/A001

A Modernized Burner for Welding Thin Metal in Carbon Dioxide

dioxide gas is supplied to the burner from a cylinder through a hose mounted in the handle and passes through the heater, reductor and a drying device. The tip must be inserted into the nozzle to 10 - 15 mm depth. The throat depth of the electrode from the burner must not exceed 40 mm at an arc ignition of 160 - 180 amps current. During welding the electrode throat is 20 - 25 mm. The burner can be easily assembled and dismantled. Tests made with the burner yielded satisfactory results when welding butt and overlap joints of 4 mm thick "3" grade steel, at 180 amps current and 2 mm diameter C_B-10ГC (Sv-10GS) wire. There is 1 figure.

Card 2/2

SHPAN'KO, G.F.

The SShN-3 planter. Biul.tekh.-ekon.inform.Gos.nauch.--issl.
inst.nauch.i tekh.inform. no.5:68-69 '62. (MIRA 15:7)
(Planters (Agricultural machinery))

SHPAN'KO, T.P.

State examinations on safety regulations. Bezop.truda v prom. 3
no.7:4-5 JI '59. (MIRA 12:11)

1. Predsedatel' Komiteta Gosgortekhnadzora USSR.
(Ukraine--Safety education, Industrial)

SHPAN'KO, T.P.

For a further improvement of safety engineering in coal mines.
Ugol' Ukr. no.6:1-4 Je '60. (MIRA 13:7)

1. Predsedatol' Gosgortekhnadzora USSR.
(Coal mines and mining--Safety measures)

KHRUSHCHEV, N.S.; PODGORNYY, N.V.; ZASYAD'KO, A.F.; RUDAKOV, A.P.; KAZANETS, I.P.; SHILIN, A.A.; MEL'NIKOV, N.V.; BURMISTROV, A.A.; SHEVCHENKO, V.V.; MAYAKOV, L.I.; ROZENKO, P.A.; KUZ'MICH, A.S.; ZADEMIDKO, A.N.; BRATCHENKO, B.F.; STRUYEV, A.I.; KRASNIKOVSKIY, G.V.; BOYKO, A.A.; KAGAN, F.Ya.; USKOV, A.A.; VLADYCHENKO, I.M.; TOPCHIYEV, A.V.; DEGTYAREV, V.I.; KHUDOSOVTSSEV, N.M.; GRAFOV, L.Ye.; IVANOV, V.A.; KRATENKO, I.M.; GOLUB, A.D.; IVONIN, I.P.; SAVCHENKO, A.A.; ROZHCHENKO, Ye.N.; CHERNEGOV, A.S.; MARKELOV, M.N.; LALAYANTS, A.M.; GAPONENKO, F.T.; POLUEKTOV, I.A.; SKLYAR, D.S.; PONOMARENKO, N.F.; POTAPOV, A.I.; POLYAKOV, N.V.; SUBBOTIN, A.A.; POLSTYANOV, G.N.; TRUKHIN, P.M.; TKACHENKO, A.G.; OSTROVSKIY, S.B.; NYRTSEV, M.P.; DYADYK, I.I.; SHPAN'KO, T.P.; RUBCHENKO, V.P.

Kondrat Ivanovich Pochenkov; obituary. Sov. shakht. 11 no.9:
48 s '62. (MIRA 15:9)

(Pochenkov, Kondrat Ivanovich, 1905-1962)

SHPAN'KO, T.P.

For safe work of miners. Bezop.truda v prom. 6 no.8:l-2 Ag '62.
(MIRA 16:4)

1. Predsedatel' Gosudarstvennogo komiteta pri Sovete Ministrov
UkrSSR po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti
i gornomu nadzoru.
(Mining engineering—Safety measures)

SHPAN'KO, Ye. A.

Shpan'ko, Ye. A.

"The dependence of the course of immunological reactions on the functional state of the nervous system." Inst of Epidemiology and Microbiology imeni Honorary Academician N. F. Gamaleya. Voronezh, 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

Knizhnaya letopis'
No. 21, 1956. Moscow.

BRYZZHEV, L.D.; BURDUN, G.D.; LEYKIN, A.Ya.; OKHOTINA, S.M.; SIMKIN, G.S.;
SHPAN'ON, P.A.

~~_____~~
Precise determination of the units of time and frequency by means of
atomic constants. Izv. tekh. no.3:3-9 My-Ja '55. (MLRA 8:9)
(Time measurements)

SHPAN'ON, P.A.

Instrument for checking modulation meters used in standard signal
generators. Izv.tekh. no.6:36-40 N-D '55. (MLRA 9:3)
(Radio frequency modulation) (Electronic measurements)

SHPAN'ON, P. A.

SHPAN'ON, P.A.

Diode modulation meters used for checking the GSS-6 standard
signal oscillators by the percentage modulation factor. Izv.
tekh. no.2:77-80 Mr-Apr '57. (MLRA 10:6)
(Electronic measurements)
(Modulation (Electronics))

SHPAN'ON, P.A.

24(0); 5(4); 6(2) PHASE I BOOK EXPLOITATION SOV/2215

Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni D.I. Mendeleeva

Referaty nauchno-issledovatel'skikh rabot; sbornik No. 2 (Scientific Research Abstracts; Collection of Articles, Nr 2) Moscow, Standartgiz, 1958. 139 p. 1,000 copies printed.

Additional Sponsoring Agency: USSR. Komitet standartov, ser 1 izmeritel'nykh priborov.

Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers, and engineers engaged in developing standards, measures, and gages for the various industries.

COVERAGE: The volume contains 128 reports on standards of measurement and control. The reports were prepared by scientists of institutes of the Komitet standartov, ser 1 izmeritel'nykh priborov pri Sovete Ministrov SSSR (Commission on Standards, Measures, and Measuring Instruments under the USSR Council of Ministers). The participating institutes are: VNIIM - Vsesoyuznyy nauchno-issledovatel'skiy metrologii imeni D.I. Mendeleeva (All-Union Scientific Research Institute of Metrology imeni D.I. Mendeleev) in Leningrad; Sverdlovsk branch of this institute; VNIK - Vsesoyuznyy nauchno-issledovatel'skiy institut komiteta standartov, ser 1 izmeritel'nykh priborov (All-Union Scientific Research Institute of the Commission on Standards, Measures, and Measuring Instruments), created from MGIMIP - Moskovskiy gosudarstvennyy institut ser 1 izmeritel'nykh priborov (Moscow State Institute of Measures and Measuring Instruments), created by the VNIIM; VNIIT - Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh izmereniy (All-Union Scientific Research Institute of Physico-technical and Radio-engineering Measurements) in Moscow; KHGMIP - Khar'kovskiy gosudarstvennyy institut ser 1 izmeritel'nykh priborov (Khar'kov State Institute of Measures and Measuring Instruments); and MGIMIP - Novosibirskiy gosudarstvennyy institut ser 1 izmeritel'nykh priborov (Novosibirsk State Institute of Measures and Measuring Instruments). No personalities are mentioned. There are no references.

Tovchigrechko, S.S. (VNIIM). Studying Recurrent Errors of Micrometric Screws of Level Triers 45

Solov'yeva, L.A. (VNIIM). Studying the Curvature of the Tube of Levels 45

Bryzhev, L.D., V.P. Lubintsov, S.M. Obhotina, and P.A. Shpan'on (KHGMIP). Measuring the Spectrum of Standard Frequencies Produced by the KHGMIP Standard Frequency Unit to 10¹⁰ Cycles per Second 47

Smagin, A.G. (VNIIFTRI). Quartz Resonator With a Quality Factor of 12.5 * 10⁶ 47

Gitanenko, I.V., Ye.D. Novgorodov, N. Kh. Neparidze, T.S. Oumanyuk, Sh.M. Mabin, and A.I. Samoylovich (KHGMIP). Developing Quartz Elements of Oblique Cut 48

Bryzhev, L.D., M.D. Sapel'nikov, V.N. Titov, P.P. Yestaf'yev, and V.I. Nursov (KHGMIP). Developing and Studying Simple and Suitable Oscillators and Convertors of High Stability for Time and Card 10/27 49

SHPA'ION, P.A.

Standard instruments for checking uhf standard signal oscillators
using the method of the coefficient of percentage amplitude modulation.
Izm.tekh. no.2:78-82 Mr-Ap '58. (MIRA 11:3)
(Electronic instruments)

SHPAN'ON, P.A.; PETROV, N.B.

Oscillographic measurement of the frequency deviation of frequency modulated oscillations. Izv.tekh. no.3:34-37 Mr '60. (MIRA 13:6)
(Frequency measurements)

83158

S/115/60/000/008/008/013
B019/B063

6.4734

AUTHORS: Karavashkin, B. K., Shpan'on, P. A.

TITLE: Investigation of the Method of Measuring the Frequency Deviation of a Frequency-modulated Oscillation According to the Zeros of a Bessel Function

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 8, pp. 33-35

TEXT: In the introduction to the present article, the authors give the determination of the frequency deviation of frequency-modulated oscillations by means of receivers. The present article deals with problems connected with the determination of the frequency deviation by means of spectral analyzers. It is noted that, though that such measuring techniques are described in various publications, the error in measurement and the influence of secondary effects had hitherto not been estimated, as far as the authors know. The authors used a spectral analyzer whose intermediate-frequency amplifier had a transmission band in the range of 20 cps at a frequency of 110 kc/sec. Thus, it was possible to carry out a spectral analysis at a minimum modulating frequency of 500 cps. In the analysis of

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30309

S/115/61/000/008/005/009
E073/E535

9.3273 (1040)

AUTHOR: Shpan'on, P.A.

TITLE: On measuring the frequency deviation of frequency-modulated oscillations by means of a counter-frequency meter

PERIODICAL: Izmeritel'naya tekhnika, no.8, 1961, 40-42

TEXT: One of the standard methods of measuring the frequency deviation in KhGIMIP is based on heterodyning the frequency modulated signal and measuring the variable frequency of the signal at the output of the mixer (whose average frequency is in the vicinity of zero) by means of a counter-type frequency meter. The use of a counter-frequency meter operating continuously during a time interval much longer than the period of the modulating frequency was proposed by L. D. Bryzzhev in 1957. The practical use of this method over a wide range of carrier frequencies necessitated investigation of the relationship between the indication of the counter-frequency meter and the measured deviation at any given value of the average intermediate frequency and the relationship between the additional measurement error and
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S/108/61/016/012/005/009
D201/D302

9,3273 (1040, 1159)

AUTHOR: Shpan'on, P.A.

TITLE: The effect of parasitic amplitude modulation on the performance of a counter-type frequency discriminator

PERIODICAL: Radiotekhnika, v. 16, no. 12, 1961, 37-43

TEXT: In the present article, the author considers the effect of spurious AM, usually present in FM, on the performance of a frequency discriminator with a counting circuit. The counting circuit consists of an RC differentiating cct, producing pulses of a single polarity. The cct, consisting of the RC network and of two detectors is usually referred to as the counting circuit, with the signal at its output in the form of a sequence of time modulated pulses, decaying exponentially. The input to the RC network consists of a composite AM-FM modulated signal which may be represented by Eq. (1) $u = U_{m0} (1 + m \cos \Omega t) \sin \left(\omega t + \frac{\Delta \omega}{\Omega} \sin \Omega t \right)$.

where m - modulation depth of the spurious AM; $\omega = 2\pi f$ - the angular

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The effect of parasitic ...

frequency of the carrier; $\Omega = 2\pi F$ - the angular modulating frequency,

$\frac{\Delta \omega}{2\pi}$ - frequency deviation. If the limiting levels are assumed to be constant compared with the smallest amplitude of oscillations given by Eq.(1), the frequency spectrum component at frequency $F = \frac{\Omega}{2\pi}$, used

for determining the duration, may be determined by solving Eq. (10a)

$$J_F = \left\{ \frac{[C(a+b)\Delta f]^2}{1+(\Omega RC)^2} + \left[\frac{b^2 - a^2}{2U_{mo}} \frac{CF \left(m + \frac{3}{8}m^3 + \dots \right)}{1+(\Omega RC)^2} \right]^2 \right\}^{\frac{1}{2}}$$

obtained after several transformations for the practical case when $\frac{\Delta \omega}{\omega}$ is small, the parasitic AM being considerable for small deviations.

In this expression U_{mo} - the peak carrier amplitude a - the positive going amplitude of the sliced carrier, b - the negative going amplitude of same. Thus the error in measuring deviation as introduced by AM

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The effect of parasitic ...

is obtained. The values of m_1 , m_2 and of (a-b) depend on the choice of limiting circuit and on proper operating points of the limiter valves. The theoretical results of this article have been checked experimentally with cathode followers as limiters, having adjustable limiting levels. Both the theory and experiments have shown that, with properly chosen limiters and with symmetrical limiting, the counter-type deviation meters may be used for relatively accurate measurements of frequency deviation 10-20 kc/s (3-5%) provided the depth m of spurious AM does not exceed 40%. The instruments are not suitable for measuring with the same accuracy small deviations at large AM, such as spurious FM of AM signals. There are 3 figures, 1 table and 7 references: 3 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: M.C. Scroggie, Wireless World, v. 62, no. 4, 1956; A.R. Vallarino, H.A. Snow, C. Greenwald, Electronics, v. 26, 1953; G.G. Johnstone. Wireless World, v. 63, no. 6, 1957.

4

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications im. A.S.

Card 4/5

SHPAR'ON, P.A.; BELIKOV, V.A.

Active spectral method for testing diode modulation meters.
Izm. texh. no.1:43-45 Ja '64.

(MIRA 17:11)

SHPANOV, A.S., inzh.

Transfer-machine units and lines with a step-by-step
tracking device. Vest.mashinostr. 43 no.2:52-56 F '63.
(MIRA 16:3)

(Machinery, Automatic)

LUKOSHKINA, L.A., kand. tekhn. nauk; MAKOTINSKIY, M.P., kand. arkh.;
MIKHAYLEVSKIY, P.A., inzh.; TSILLI, L.B., kand. arkh.;
SHPANOV, I.A., arkh.; Prinsipali uchastiye: BOGUSLAVSKIY,
A.I., inzh.; GALAKTICHOV, A.A., kand. tekhn. nauk; LIVSHITS,
A.M., inzh.; ZHUKOV, K.V., kand. arkh., retsenzent; SOKOLOV,
P.N., prof., retsenzent; GURVICH, E.A., red. izd-va; TEMKINA,
Ye.L., tekhn. red.

[Catalog of finishing materials and products] Katalog otdeloch-
nykh materialov i izdelii. Moskva, Gosstroizdat. Pt.4. [As-
bestos cement] Asbestotsement. 1961. 36 p. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh
stroitel'nykh materialov. 2. Nauchno-issledovatel'skiy institut
slyudy, asbestotsementnykh izdeliy i proyektirovaniya stroitel'-
stva predpriyatiy slyudinoy promyshlennosti (for Lukoshkina,
Mikhaylevskiy).

(Asbestos cement)

VASILEVSKIY, V.V., inzh.; SHPANOV, I.A., arkhitektor; CHESNOKOV, M.M.,
kand.tekhn.nauk; MITROFANOV, G.K., inzh.

Make fuller use of natural resources of ashlar and trim stone.
Stroi.mat. 8 no.10:32-33 0 '62. (MIRA 15:11)
(Building stones)

LOSKUTOVA, L.T.; MAKOTINSKIY, M.P., kand. arkh.; RUDINA, M.A., arkh.;
SHPANOV, I.A., arkh. Primal uchastiye LIVSHITS, A.M., inzh.;
GROMOV, V.L., kand. tekhn. nauk, retsenzeng; KRASNOVSKIY,
N.V., kand. tekhn. nauk, retsenzent; PAVLOV, V.P., kand. tekhn.
nauk, retsenzent; PODZOROVA, N.G., inzh., retsenzent; FOLOMIN,
A.I., doktor tekhn. nauk, retsenzent; GURVICH, E.A., red.

[Catalog of finishing materials and elements] Katalog otdelech-
nykh materialov i izdelii. Moskva, Gosstroizdat. Pt. 8; [Wood
and paper] Derevo i bumaga. 1962. 56 p. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroi-
tel'nykh materialov.

(Finishes and finishing)

SHPANOV, N. V.

Fil'try nepreryvnogo deistviia; teoriia, opisaniie, raschet. Moskva, Mashgiz, 1949.
182 p. illus.

Bibliography: p. 180-(181)

Continuous filters; theory, description, calculations.

DLC: TP156.P585

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

SHPANOV, N.V.

1957
Bell vacuum filter: A. I. Vostokov and N. V. Shpanov
U.S.S.R. 103,175, Apr. 25, 1957. M. Hosen

2

anf

Шпанов, И.И.
BERNEY, Ivan Ivanovich, kand. tekhn. nauk; SOKOLOV, P.N., prof., nauchnyy red.;
SHPANOV, N.Y., inzh., nauchnyy red.; PEVZNER, V.S., red.; GILENSON,
P.G., tekhn. red.

[Manufacturing asbestos cement sheets; theory and design] Formovanie
asbestotsementnykh listov; teoriya i raschet. Moskva, Gos.
izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1958. 278 p.
(Asbestos cement) (MIRA 11:5)

SOV/63-3-6-11/43

AUTHOR: Shpanov, N.V.

TITLE: Industrial Filtration (Promyshlennaya fil'tratsiya)

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1958, Vol III, Nr 6,
pp 777-782 (USSR)

ABSTRACT: The equations for filtration contain several constants which must be determined experimentally, e.g. the specific resistance of the precipitate and of the filtering substance. For pressure filters the functional relation of the filtration resistance to pressure must also be known. In other equations the specific resistance of the precipitate is replaced by the average diameter and the sphericity of the particles of the solid phase, by the porosity of the precipitate, etc. In [Ref. 13] the filtration of various substances and the conduct of the precipitates is considered together with adsorption, electrokinetic phenomena, resistance in the boundary layer, etc. Equations for the duration of the production cycle of the filters are proposed in [Ref. 17]. The different sizes of press filters, drum and disc vacuum filters, etc are controlled by State Standards. At the Ural Chemical Machine Plant (Uralkhimmash) a drum vacuum filter with a surface of 20 m² is being developed. The Ukrainian Scientific Research Institute of Chemical Machine Building is developing a 30-m²

Card 1/2

SOV/63-3-0-11/43

Industrial Filtration

two-storied filter for coal dressing. A press filter with hydraulic discharge is produced in two types with a surface of 48 and 100 m². A chamber press filter FPAK is automatically controlled and is produced with operating surfaces of 5 - 50 m². It operates with pressures up to 6 atm and temperatures of 5 - 60°C. Several foreign filters are also mentioned. There are 4 photos, 1 diagram and 25 references, 19 of which are Soviet, 3 English, 1 Canadian and 2 French.

Card 2/2

SHPANOV, N.V., inzh.; KONOVALOVA, V.I., inzh.

Selecting washing and dewatering conditions for sulfate pulp in
drum-type vacuum filters. Trudy NIIKHIMMASH no. 29:117-125 '59.
(MIRA 14:5)

(Wood pulp) (Paper making machinery)

SHPANOV, N.V.

Modern filtration techniques. Zhur.VKHO 10 no.1:43-51 '65.
(MIRA 18:3)

SECRET, U.S.S.R.

52/49158

USSR/Medicine - Gentianin
Medicine - Chemistry, Physical

May 49

"Gentiana Kirilowi Alkaloids," N. F. Proskurnina,
V. V. Shpanov, R. A. Konovalova, All-Union Sci Res
Physicophar Inst imeni S. Ordzhonikidze, 2 pp

"Dok Ak Nauk SSSR" Vol LXVI, No 3

Structural formula of gentianin was established by
oxidation with permanganate, entailing formation
of isonicotinic acid. It was found to contain a
vinyl group. Because of its structure it differs
from well-known alkaloids of related substances.
Submitted by Acad A. N. Nesmeyanov, 14 Mar 49.

52/49158

SHPANOV, V. V.

SHPANOV, V. V. -- "Investigation of an Alkaloid of Gentian." Sub 21 Jan 52,
All-Union Sci Res Chemicopharmaceutical Inst imeni Sergo Ordzhonikdze.
(Dissertation for the Degree of Candidate in Chemical Sciences).

SO: Vechernaya Moskva January-December 1952

PROSKURNINA, N.F.; SHPANOV, V.V.

Configuration of gentianine. Zhur.ob.khim. 26 no.3:936 Mr '56.
(MLBA 9:8)

(Gentianine)

ZHDANOV, Yuriy Andreyevich; DOROFEYENKO, Gennadiy Nikolayevich;
SHPANOV, V.V., red.; DOROKHINA, I.N., tekhn. red.

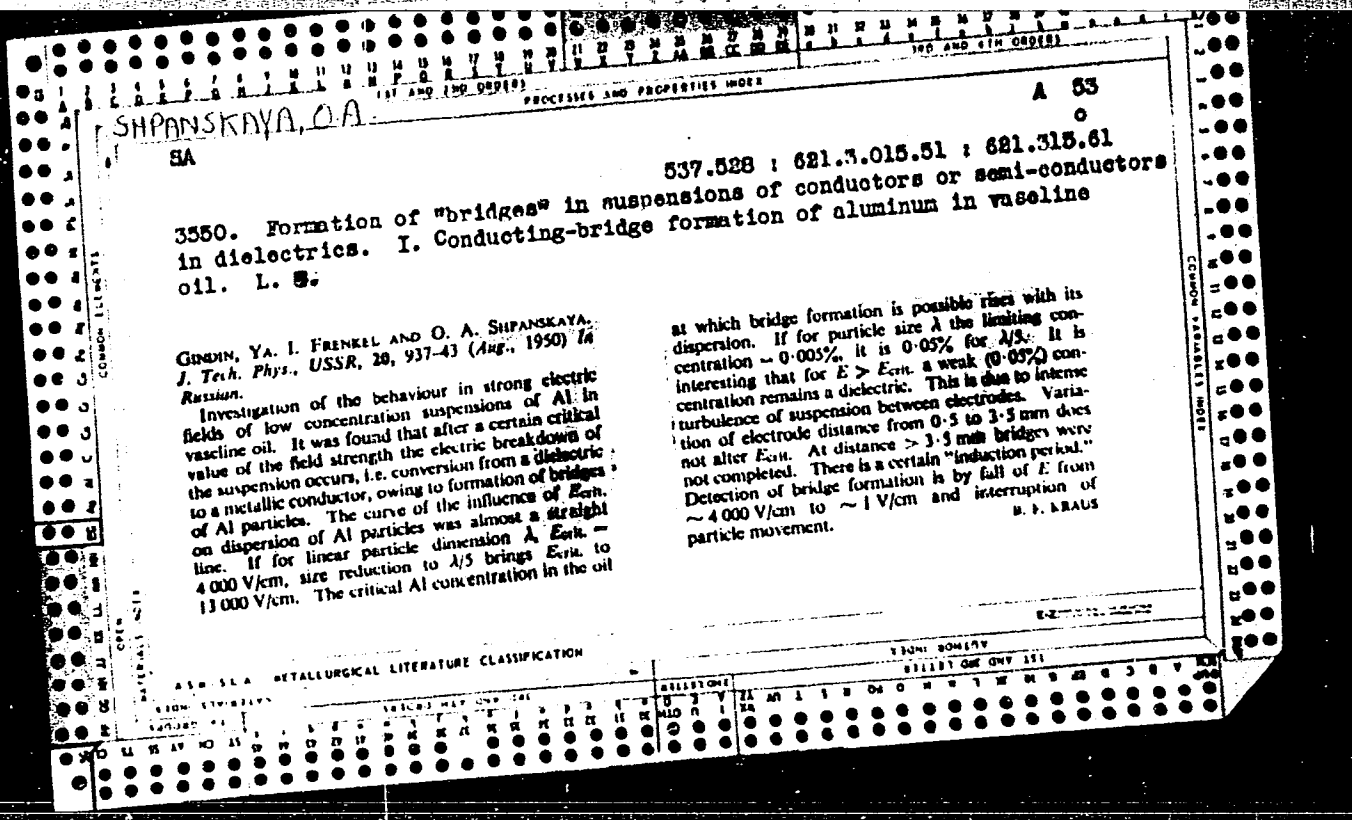
[Chemical transformations of the carbon skeleton structure of
carbohydrates] Khimicheskie prevrashchenia uglerodnogo skeleta
uglevodov. Moskva, Izd-vo Akad. nauk SSSR, 1962. 210 p.
(MIRA 15:12)

(Carbohydrates) (Chemistry, Organic)

~~SHpanova, Lyubov' Grigor'yevna; LEBEDEV, P.B., red.; MEDVEDEVA, R.A.,
tekh. red.; YELAGIN, A.S., tekh. red.~~

[A party committee and the brigades of communist labor] Partiinyi
komitet i brigady kommunisticheskogo truda. Moskva, Izd-vo
"Sovetskaia Rossiia," 1960. 78 p. (MIRA 14:7)

1. Zamestitel' sekretarya partkoma Novosibirskogo metallurgicheskogo
zavoda imeni A.N.Kuz'mina (for Shpanova)
(Novosibirsk--Steel industry)



SHPANSKAYA, O. A.

SA

532.69 : 531.43

5548. Sliding of liquid drops between solid surfaces. YA. L. FRENKEL AND O. A. SHPANSKAYA. Dokl. Akad. Nauk, SSSR, 71 (No. 1) 37-8 (1950) in Russian. One of a series of investigations on the behaviour of sliding drops [see Abstr. 93 (1949), 765 (1950)] of the school of Ya. Frenkel, based on the theory of the carrying along of drops by a moving plate along a fixed one at half the speed of the moving plate. The experiments with Hg drops exactly confirmed this theoretical result, when the top (glass) plate was loaded with weights up to 100 g, and in the speed range between 0.01 and 0.09 cm/sec. The weights of the drops varied from 10^{-2} to 10^{-1} g. The behaviour of the drops is similar to that of balls in a ball-bearing and corresponds to ideally frictionless rolling. The case is more complicated for vaseline or aviation oils, even outwardly, as the ellipsoidal form of the drops (only slightly indicated for Hg) becomes more marked, and the ellipsoids lie with their long axis perpendicular to the direction of the movement. Yet the CG of the drop still moves at half the relative speed of the plates. An important result established was that the laws of Amontons and Coulomb do not apply to "dry" friction, but only to friction between lubricated surfaces. R. P. KRAUS

U.S. Union Ind.
Aviation Materials

ASSOCIATION OF METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

SHFANSKAYA, O. A.

1 Jun 50

USSR/Physics - Dielectrics
New Techniques

"Electric Rupture of Metal Suspensions in Liquid Dielectrics," L. G. Gindin,
L. M. Moroz, I. N. Putilova, Ya. I. Frenkel', Corr Mem, Acad Sci USSR, O. A.
Shpanskaya

"
"Dok Ak Nauk SSSR" Vol LXXII, No 4, pp 671-674

Describes apparatus used in actual studies of subject rupture. Gives purely
phenomenological (gross macroscopic) description of phenomenon of rupture in metal
suspensions. Theoretical analysis will appear later. Suspensions of aluminum
powder in gasoline, vaseline, oil, etc., were mainly used, varying in metallic
content from 0.005 to 1% (usually 0.1%). Submitted 5 Apr 50

PA 165T102

10-Phenylacetylenyl-9,10-dihydrophenarsazine and its properties. V. Shpanakid. *J. Gen. Chem.* (U. S. S. R.) 4, 658 61(1934).—10-Chloro-9,10-dihydrophenarsazine (I) in Et₂O and CPh(CN) yield 10-phenylacetylenyl-9,10-dihydrophenarsazine (II), m. 172°, which with HCl regenerates I and CPh(CH (III), with I in C₂H₆ yields the 10-I analog of I and CPh(Cl, and with H₂O₂ the 10,10-dihydroxide (IV) of II. IV and HCl yield 10-phenylacetylenyl-9,10-dihydrophenarsazine hydrochloride, m. 148° (decompn.), which gives I and III on reduction with SO₂ in EtOH. B. C. A.

10

AS 3-31-A METALLURGICAL LITERATURE CLASSIFICATION

SHPANSKI, V. A.

62
 Addition of nitrosyl chloride to fluorinated olefins. II. A. Ya. Yakubovich, V. A. Shpanski, and A. L. Lemke. *Zhur. Obshchei Khim.* 24, 2257-66(1954); cf. *C.A.* 44, 1011b. — A soln. of 17 g. Na in 550 g. BuOH was treated at 100° over 3-4 hrs. with 74 g. C_2H_5ClF yielding as a distillate about 1 g. $CH_2=CHF$, b. -72° to -71° . This (10 g.) and 16.5 g. NOCl kept in sealed tube 3 days gave $CHClFCH_2Cl$, 0.1 g. b. $77-113^\circ$ (crude), and 54% $CHClFCH_2NO_2$, b. 55.5° , $d_{20} 1.4091$, $n_D^{20} 1.4644$. Treatment of $(CH_2Cl)_2$ with SbF_5 in glass with activation by SbF_5 and Br gave $CHClF-CHCl_2$, which was converted conventionally to $CHCl_2-CHF$. This (18.5 g.) and 13 g. NOCl kept 72 hrs. in sealed tube gave 45% $CHFCICCl_2NO_2$, b. $75-85^\circ$ (crude), b. $76-8^\circ$, $d_{20} 1.5749$, $n_D^{20} 1.4472$, which decomposes in storage; with $PhNH_2$ it gave $PhNHCHFC(:NO)NHP$, m. 157° . To 70 g. $C_2H_5Cl_2F$ was added a soln. of 11.5 g. Na in 300 ml. iso-AmOH, yielding a distillate of 37 g. $CCl_2=CHF$, b. 37.5° . This (22.5 g.) and 15 g. NOCl kept 7 days in a sealed tube gave 25 g. crude trichlorofluoronitroethane, b. $64-70^\circ$. Redistn. gave a substance, b. 30° , b. 53.5° , which contained Cl but not N, along with 55% $CHClFCCl_2NO_2$, b. $64-70^\circ$ (crude), b. $68-9^\circ$, $d_{20} 1.677$, $n_D^{20} 1.309$. Heating in a steel autoclave 1 kg. $C_2H_5Cl_2$ with 800 g. 99% dry HF and 500 g. $SbCl_5$ 5 hrs. to 165° at 40-5 atm. followed by distn. gave 670 g. mixed products which after fractionation gave 520 g. $CCl_2=CHCl$, b. $72-4^\circ$. This (150 g.) added in 2 hrs. to 80 g. Zn dust in 300 ml. EtOH, followed by 60 g. Zn dust and refluxing 2 hrs. gave 40 g. $CF_2=CHCl$, b. -16.5° . This

(30 g.) and an equiv. amt. of NOCl kept in sealed tube 12 hrs. at 0° in proximity of an electric light bulb showed no reaction; after 72 hrs. at room temp. the mixt. yielded a complex mixt. from which was isolated 2 g. $CHCl_2CF_2NO_2$, b. 90° , b. 52° , $d_{20} 1.697$, $n_D^{20} 1.3982$. The main part of the mixt. was a yellow viscous mass which gave some $C_2H_2O_2N_2Cl_2F_2$, whose structure was undetd.; this substance, b. 132° , $d_{20} 1.751$, gives only a trace of ionic Cl in H_2O ; but reacts with aq. NaOH. Heating in an autoclave 1 kg. C_2Cl_4 , 450 g. $SbCl_5$, and 850 g. 99% HF over 5 hrs. to 160° (45-50 atm. final pressure) gave 710 g. crude products which on distn. gave 160 g. $CCl_2FCCl_2(I)$, b. 47.7° , along with other products including 85 g. CFC_2CCl_2 , b. $90-2^\circ$. I (150 g.) added in 3 hrs. to 80 g. Zn dust in 30 ml. EtOH, followed by 40 g. Zn dust and refluxing 1 hr., gave 57 g. $CF_2=CClF$, b. -27.5° . This (57 g.) and 39 g. NOCl in sealed tube 96 hrs. gave 35% unreacted materials and 62 g. products; distn. gave trichlorotrifluoroethane and $CF_2CICFCINO_2$, b. $77-8^\circ$, $d_{20} 1.6262$, $n_D^{20} 1.3727$. The addn. reactions of NOCl occur in accord with the expected polarity of the unsatd. link; the pos. NO group adds to the neg. C atom.

G. M. Kosolapoff

3.17.10.001 V4

13780* (Condensations of Fluorized Olefines With Nitrosyl Chloride.) Kondensatsii fluorirovannykh olefinov s khlornym nitrozilem. A. Ia. Iakubovich, Y. A. Shpanskiy and A. L. Lemko, *Doklady Akademii Nauk SSSR*, v. 96, no. 4, June 1, 1954, p. 773-776.

Experiment checks previous conclusion that in most cases nitrosyl chloride joins with the ethylene bond in accordance with the polarities of the reacting bonds. 1 ref. /M

S/079/60/030/007/019/020
B001/B067 82301

5.3700C

AUTHORS: Ginsburg, V. A., Privezentseva, N. F., Shpanskiy, V. A.,
Rodionova, N. P., Dubov, S. S., Khokhlova, A. M.,
Makarov, S. P., Yakubovich, A. Ya.

TITLE: Reaction of Halogens, Nitrogen Oxide, and Polyfluorinated
Ethylenes in Ultraviolet Light. Synthesis and Thermal
Decomposition of Polyfluorinated Aliphatic Nitroso
Compounds

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7,
pp. 2409 - 2415

X

TEXT: In continuation of their earlier paper (Ref. 1) the authors studied the reaction of polyfluorinated ethylene with NO and halogen in ultraviolet light. They assumed that atomic chlorine or bromine would also lead to the formation of β -halogen nitroso compounds. In fact, the authors of the present paper showed that in the reaction of nitrosyl chloride with symmetrical difluoro-dichloro ethylene, 1,2-difluoro-1,2,2-trichloro-nitroso ethane results in good yields. This compound

Card 1/3

Reaction of Halogens, Nitrogen Oxide, and
Polyfluorinated Ethylenes in Ultraviolet
Light. Synthesis and Thermal Decomposition of
Polyfluorinated Aliphatic Nitroso Compounds

S/079/60/030/007/019/020
B001/B067 82301

proved sufficiently stable and could be isolated (compound 6 in the Table). The experiments showed, as had been theoretically expected, that in all cases the corresponding nitroso alkanes were obtained in sufficient yields on irradiation of the gas mixtures $\text{NO} + \text{Cl}_2$ or $\text{NO} + \text{Br}_2$

with polyfluorinated ethylenes (such as tetrafluoro-, trifluoro-chloro-, or trifluoro ethylene at the ratio olefin : $\text{NO} : \text{Hal}_2 = 1 : 1 : 1/2$)

(Table). These compounds have an intensive blue color, and are stable liquids. Besides them also the corresponding alkylene dihalides as well as β -nitrogen halide compounds are always separated from the reaction mass. Probably they are products of a partial oxidation of the nitroso compounds. In reducing the nitroso compounds obtained from trifluoro ethylene by means of hydrogen iodide the corresponding fluorides of the chloro-difluoro- and bromo-difluoro-acetohydroxamic acids are formed which indicates the addition of the halogen to the CF_2 group of the olefin in the reaction between NO , Hal_2 , and olefin. The pyrolysis of

Card 2/3

Reaction of Halogens, Nitrogen Oxide, and
Polyfluorinated Ethylenes in Ultraviolet
Light. Synthesis and Thermal Decomposition of
Polyfluorinated Aliphatic Nitroso Compounds

S/079/60/030/007/019/020
B001/B067 82301

the $\text{ClCF}_2\text{CF}_2\text{NO}$ and $\text{NO}_2\text{CF}_2\text{CF}_2\text{NO}$ nitroso compounds at $120-130^\circ$ yields the
polyfluorinated ethylenimines $\text{ClCF}_2\text{CF}_2\text{N} = \text{CFCF}_2\text{Cl}$ and $\text{NO}_2\text{CF}_2\text{CF}_2\text{N} =$ X
 $= \text{CFCF}_2\text{NO}_2$, respectively. There are 1 table and 8 references: 3 Soviet,
1 US, and 2 German.

SUBMITTED: June 4, 1959

Card 3/3

YAKUBOVICH, A.Ya.; GINSBURG, V.A.; MAKAROV, S.P.; SHFANSKIY, V.A.;
PRIVEZENTSEVA, N.F.; MARTYNOVA, L.L.; KIR'YAN, B.V.; IEMKE, A.L.

Oxidation, reduction, and disproportionation of polyfluoronitrosoal-
kanes. Dokl. AN SSSR 140 no.6:1352-1355 0 '61. (MIRA 14:11)

1. Predstavleno akademikami I.L.Knunyantsem i M.I.Kabachnikom.
(Paraffins) (Nitroso compounds) (Oxidation-reduction reaction)

SHPANSKIY, V. A.

32819

~~15-10-20~~ 2209

S/O20/62/142/001/017/021
B103/B110

11.2214
11.2131

AUTHORS:

Ginsburg, V. A., Yakubovich, A. Ya., Filatov, A. S.,
Shpanskiy, V. A., Vlasova, Ye. S., Zelenin, G. Ye.

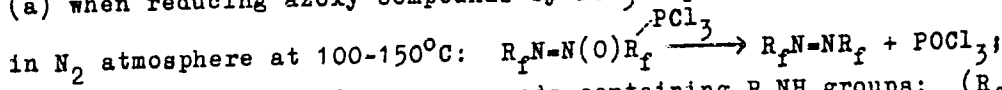
TITLE:

Production, pyrolysis, and photolysis of polyfluorinated azo
compounds of the aliphatic series

PERIODICAL:

Akademiya nauk SSSR. Doklady, v. 142, no. 1, 1962, 88-91

TEXT: Further methods of synthesizing polyfluoro azoalkanes (PFAA) and
their derivatives were elaborated. It was found that PFAA were formed:
(a) when reducing azoxy compounds by PCl₃ vapor in the vapor phase and



(b) when oxidizing hydrazo compounds containing R_fNH groups: (R_f=CF₃,

CF₂H, and others); these compounds are synthesized by reducing azoxy
compounds. Among others, the following were used as oxidizers of hydrazo
derivatives: Cl₂, Br₂; nitric oxides, chromate mixtures, potassium
permanganate in acetic acid; (c) when fluorinating linear or cyclic

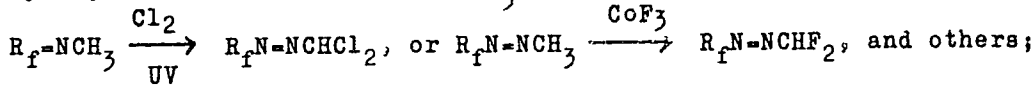
Card 1/5

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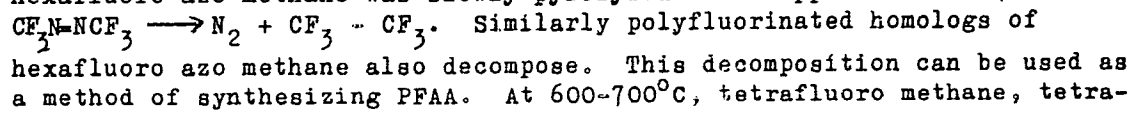
32819
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B103/B110

Production, pyrolysis, and ...

azines by CoF_3 in a carbon fluoride medium at $90-120^\circ\text{C}$, or by elementary F (diluted with N_2) at -10°C ; (d) when fluorinating nitriles of polyfluoro carboxylic acids and HCN in the vapor phase on CoF_3 at $100-150^\circ\text{C}$. Some PFAA derivatives were synthesized: (e) by chlorinating in the vapor phase in ultraviolet light (UV) at 300°C , or by fluorinating hydrogenous azo compounds on CoF_3 at $50-80^\circ\text{C}$:



(f) by the usual conversion of functional groups. The initial azo compounds used in reactions (e) and (f) were obtained by condensation of polyfluorinated nitroso alkanes with the corresponding amines. The constants of the substances obtained are tabulated. PFAA are yellow liquids or gases which explode when heated, but are much more stable than their non fluorine-containing analogs. Pyrolysis: It was found that hexafluoro azo methane was slowly pyrolyzed in a copper tube at 400°C :



Card 2/5

X

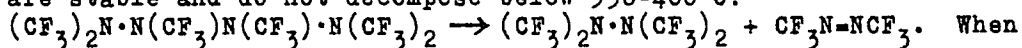
32819

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B103/B110

Production, pyrolysis, and ...

fluoro ethylene, and lamp black are formed among others. This suggests the thermal decomposition of intermediate forming trifluoro methyl radicals. The low temperature coefficient, $E_{act} = \sim 5$ kcal/mole, proves the chain radical nature of the decomposing reaction in a high concentration of azo compounds. The free radical nature of the PFAA decomposition was also proved in their photolysis in UV: hexafluoro azo methane decomposes to form perfluoro tetramethyl, perfluoro hexamethyl hydrazine, and perfluoro hexamethyl tetrazine. Polyfluorinated hexaalkyl tetrazines are stable and do not decompose below 350-400°C:



When photolyzing trifluoro and pentafluoro azo methane, substituted hydrazines and tetrazines were isolated. Due to a mass-spectrometric investigation carried out by S. S. Dubov and A. M. Khokhlova, and due to chemical conversions, it was proved that the active free radical in asymmetrical azo compounds of the $\text{CF}_3\text{N}=\text{NR}$ type was predominantly accumulated on the N atom of the azo group next to the less electrophilic group. The free radical nature of the above PFAA conversions is proved by their reaction

Card 3/5

32819

S/020/62/142/001/017/021

B103/B110

Production, pyrolysis, and ...

Pritshard, H. O. Pritshard, A. F. Trotman-Dickenson, Chem. and Ind., 1955,
564; Trans. Farad. Soc., 52, No. 6 (1956).

PRESENTED: June 1, 1961, by Academician I. L. Knunyants and M. I.
Kabachnik

SUBMITTED: June 1, 1961

X

Card 5/5

SHPANSKIY, V. A.

32339

S. 3610 2209

S/020/62/142/002/020/029
B105/B101

11.2214

AUTHORS: Ginsburg, V. A., Yakubovich, A. Ya., Filatov, A. S., Zelenin, G. Ye., Makarov, S. P., Shpanskiy, V. A., Kotel'nikova, G. P., Serdiyenko, L. F., and Martynova, L. L.

TITLE: Heterolytic transformations of polyfluorinated azoalkanes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 2, 1962, 354-357

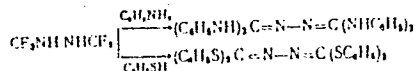
TEXT: A number of heterolytic transformations of polyfluorinated azoalkanes was discovered for the first time. The said azoalkanes, while being highly resistant to oxidizing agents, easily react with reducers (HI, H₂S, H₂P) in polar media (ether, methanol) at low temperatures, whereby the azo group is converted into the hydrazo group. Hexafluorohydrazomethane presents acid properties and is relatively stable in the solvate form in ether or acetone. The etherate reacts with ketene, and the normal diacyl derivative is formed as a result. Hydrogen fluoride is readily separated from hexafluoro hydrazomethane under the action of bases.

Card 1/15

32639

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B106/B101

Heterolytic transformations of...



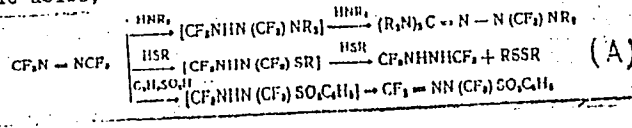
Hexafluoro hydrazomethane reacts with aluminum chloride to form the dimer of tetrafluoro formazine, and, if oxidized in anhydrous media ($KMnO_4 + CH_3COOH$), it passes over to the intensively yellow cis-form of hexafluoro azo methane, which readily takes the almost colorless trans-form under the action of light, alkali lyes, or metals. In the reduction of azoalkanes which contain the groups CF_2Cl or R_1CF_2 , the corresponding hydrazo compounds cannot be isolated, due to hydrolysis. The compound $CF_3NHNHCF_3$ can be distilled in vacuo (b.p. $56^\circ C/1$ mm Hg), and passes over to indazole under the action of hydrogen iodide. Under the action of strong acids, the azo group of polyfluoro azo alkanes is able to add one proton which, in the case of asymmetric azoalkanes, is added to the nitrogen atom adjoining the more electronegative substituent. These reactions take place most readily in anhydrous hydrofluoric acid, whereby polyfluoro azo alkanes are dimerized into benzidine derivatives. Poly-

Card 2/3 -

32539
S/020/62/142/002/020/029
B106/B101

Heterolytic transformations of...

fluorinated azo compounds are particularly sensitive to nucleophilic reagents. The reaction rate with amines grows with the amine basicity, and the reactivity in azo compounds of the type $CF_3N=NR$ drops in the sequence $R=CF_3 > CF_2H > CH_3$. With secondary amines, mercaptans, and sulfinic acids, the azo compounds react as follows:



These conversions probably begin with the formation of a transition complex of the type of a π -complex, e. g., $CF_3N=HCF_2$. This assumption

is backed by the fact that the transition complex, in the reaction of hexafluoroazane with trialkyl phosphites, can be isolated under mild

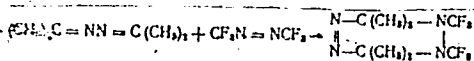
Card 3/17-

32339

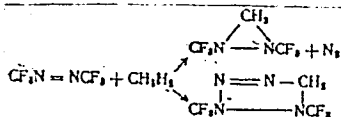
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B106/B101

Heterolytic transformations of...

conditions (cooling with dry ice). On heating, the adduct decomposes to nitrogen, tetrafluoro ethylene, diethyl ether, ethyl fluoride, diethyl fluoro phosphite, and diethyl ethane phosphinate. In analogy to azodicarboxylic acid esters, hexafluoroazane reacts with dienes readily yields the Diels-Alder addition, reacts with azines according to the scheme



and with diazomethane as follows:



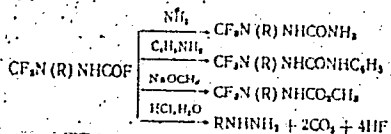
Hexafluoroazane reacts smoothly with organo-magnesium compounds at low temperatures and forms the hitherto unknown acid fluorides of

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S/020/62/142/002/020/029
B106/B101

Heterolytic transformations of...

polyfluoro alkyl-(aryl)-hydrazine carboxylic acids $CF_nH(R)NHCOP$, from which a number of further derivatives was obtained:



There are 1 table and 3 references: 2 Soviet and 1 non-Soviet.

PRESENTED: June 1, 1961, by I. L. Knunyants, Academician, and M. I. Kabachnik, Academician

SUBMITTED: June 1, 1961

Table 1. Compounds synthesized for the first time.

Legend: (a) compound; (b) boiling point; (c) melting point; (d) does not melt below 300°C.

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31750
S/020/62/142/003/017/027
B106/B110

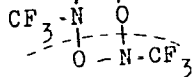
11.1135
5-2420
11.2131
AUTHORS:

Makarov, S. P., Shpanskiy, V. A., Ginsburg, V. A.,
Shchekotikhin, A. I., Filatov, A. S., Martynova, L. L.,
Pavlovskaya, I. V., Golovaneva, A. F., and Yakubovich, A. Ya.

TITLE: Reactions of polyfluorinated nitroso-alkanes with unsaturated
compounds

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 3, 1962, 596 - 599

TEXT: Trifluoronitroso methane is used as an example of some reactions of
polyfluorinated nitroso-alkanes with unsaturated compounds. These addition
reactions take place easily (in an autoclave at -70 to 0°C). Monomers and
polymers containing 1 mole of nitroso compound per olefin mole, form.
Styrene and trifluoronitroso methane also form a compound with the molar
ratio 1 : 2 which decomposes into 1 mole of nitroso compound, formaldehyde,
and the corresponding imine when heated to 70 - 80°C. Therefore it has
the structure $C_6H_5CH-CH_2$. Trifluoronitroso methane adds to diphenyl



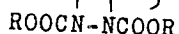
Card (1/5)

Reactions of polyfluorinated...

S/020/62/142/003/017/027
B106/B110

ketene even more easily under the formation of $(C_6H_5)_2C-CO$ which

decomposes when heated to 300°C mainly forming trifluoromethyl isocyanate (Bp. 33°C, yield 35%) and traces of trifluoronitroso methane. The latter also reacts with $R_F C \equiv CX$ alkynes ($X = Cl, Br; R_F = CF_3, CF_2Cl, CFCl_2$) at room temperature in an autoclave. $O-NCF_3$ forms on heating trifluoro-



nitroso methane with azodicarbonic acid esters to 100 - 150°C under pressure. Diazomethane and trifluoronitroso methane react at -70°C to give a polymeric nitron $[CF_3N(O)CH_2]_n$ under nitrogen separation.

Phosphazines and trifluoronitroso methane react violently at -70°C following the scheme $(C_6H_5)_3P=N-N=CH_2 + CF_3NO \rightarrow CH_2O$

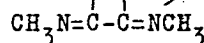
- $[(C_6H_5)_3P=N-N=NCF_3] \xrightarrow{-N_2} (C_6H_5)_3P=NCF_3$. The product of this reaction also forms from triphenyl phosphine and trifluoromethyl azide under the same conditions. Trifluoronitroso methane and methyl isocyanide react

Card 2/6

Reactions of polyfluorinated...

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B106/B110

vigorously when heated to 25°C in an autoclave to form O-NCF_3 which



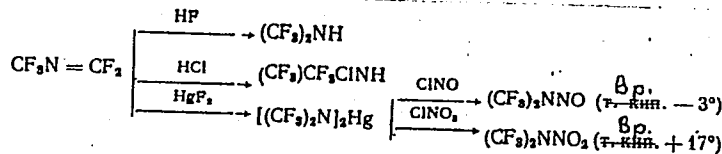
decomposes into trifluorinated dimethyl carbodiimide and methyl isocyanate when heated to 350 - 400°C in vacuo. These reactions demonstrate the great tendency of the N=O groups of trifluoronitroso methane to addition reactions with nucleophilic and electrophilic compounds. For comparison, some additions similar to the above reactions were conducted with polyfluorinated azomethines: $\text{CF}_3\text{N}=\text{CF}_2$ (Bp. -33°C) and $\text{CF}_3\text{N}=\text{CFCl}$ (Bp. -5°C). In all cases, the additivity of the C=N groups of these compounds was much lower. On reaction of $\text{CF}_3\text{N}=\text{CF}_2$ with diphenyl ketene (autoclaved for 12 hrs at 180°C), not addition, but dimerization of the initial substance took place. The dimer also formed in almost quantitative yields by reaction between $\text{CF}_3\text{N}=\text{CF}_2$ and pyridine at -70 - 50°C. With aniline, the dimer converts into the anilide of the monomer, when subjected to pyrolysis (> 500°C) it dissociates into the monomer ($\text{CF}_3\text{N}=\text{CF}_2$). Unlike the polyfluorinated azomethines above, difluoro formimine easily

Card 3/6

Reactions of polyfluorinated...

S/020/62/142/003/017/027
B106/B110

reacts with diphenyl ketene to form the adduct $(C_6H_5)_2CCO \cdot 2CF_2NH$.
Addition reactions with hydrogen fluoride, hydrogen chloride, and mercuric fluoride following the schemes



are very characteristic for the polyfluorinated azomethines in question. The tendency of polyfluorinated substances with double bonds to addition reactions with olefins therefore decreases as follows: $N=O > N=N > N=C$. Table 1 shows the physical constants of the compounds synthesized for the first time. There are 1 table and 12 references: 4 Soviet and 8 non-Soviet. The three most recent references to English-language publications read as follows: E. E. Griffin, R. N. Haszeldine, Proc. Chem. Soc., 1959, 369; 1960, 1151 - 1155; C. E. Griffin, R. N. Haszeldine, J. Chem. Soc., 1960, 1398; J. Crawford, J. Polym. Sci., 45, No. 145, 261 (1960).

Card 4/6

GINSBURG, V.A.; YAKUBOVICH, A.Ya.; FILATOV, A.S.; SHPANSKIY, V.A.;
VLASOVA, Ye.S.; ZELENIN, G.Ye.; SERGIYENKO, L.F.; MARTYNOVA, L.L.;
MAKAROV, S.P.

Production, pyrolysis, and photolysis of polyfluorinated azo
compounds of the aliphatic series. Dokl. AN SSSR 142 no.1:88-91
Ja '62. (MIRA 14:12)

1. Predstavleno akademikami I.L. Knunyantsem i M.I. Kabachnikom.
(Azo compounds) (Fluorination)

L 050/0-01 ENT(j)/ENT(m) RM/AN/JW

ACC NR: AP6028898

SOURCE CODE: UR/0079/66/036/008/1419/1420

AUTHOR: Makarov, S. P.; Yermakova, I. V.; Shpanskiy, V. A.

30

ORG: none

29

TITLE: Fluorination of liquid acetonitrile with free fluorine

B

SOURCE: Zhurnal obshchey khimii, v. 36, no. 8, 1966, 1419-1420

TOPIC TAGS: fluorination, acetonitrile, free fluorine, *fluorine*

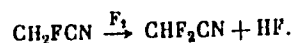
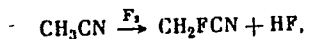
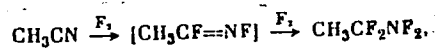
ABSTRACT: A study has been made of the fluorination of liquid acetonitrile with free fluorine rarefied with nitrogen. The reaction was conducted at 10—15C with vigorous agitation. There were no flares or explosions. Hydrogen fluoride formed in the reaction slowed down fluorination and had to be bound with sodium fluoride. The reaction products were fluoroacetonitrile, difluoroacetonitrile, N-fluoro-1,1-difluoroethylenimine, and N,N-difluoro-1,1-difluoroethylamine. The reactions can be represented as follows:

Card 1/2

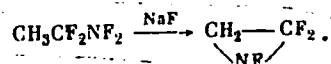
UDC: 547.23

L 05870-67

ACC NR: AP6028898



The cyclic product could have been formed by déhydrofluorination of N,N-difluoro-1,1-difluoroethylamine ¶



[BO]

SUB CODE: 07/ SUBM DATE: 17Jul65/ ORIG REF: 001/ OTH REF: 004

kh

Card 2/2

SHpanyar, Ye. [Spaniar, E.] ; KISELA, I. [Kysela, J.]

Steroid spectrum as a diagnostic criterion in true hermaphroditism. Probl. endok. i gorm. 9 no.5:101-105 S-0'63

(MIRA 16:12)

1. Iz Endokrinologicheskogo klinicheskogo instituta (dir. Ye. Shpanyar) v Lyubokhne, Chekhoslovakiya.

SHPAN'YAR, P.

Determining the composition of organic substances contained in
small amounts in food products. Kons. i ov. prom. 14 no.7:32-34
Jl '59. (MIRA 12:9)

1. Issledovatel'skiy institut konservnoy, myasnoy i kholodil'noy
promyshlennosti v Budapeshte.
(Food--Analysis)

SHPARA, P. M.

Large residential blocks in Kharkov, Zhil.stroi. no.5:6-9 My '61.
(MIRA 14:6)

1. Glavnyy arkhitektorgoroda Khar'kova.
(Kharkov—City planning)

KHARAGORGIYEV, S.Ye., inzh.; SHPARAGA, I.D., inzh.

Trends in the design of central regional foundries. Mashinostroenie
no.1:43-50 Ja-F '62. (MIRA 15:2)

1. Ukgiprostanok, Kiyev.
(Foundries)

SHPARAGA, I.D.

New design of a nut. Mashinostroitel' no.7:9 J1 '65.

(MIRA 18:7)

DMITRIYEV, Anatoliy Vasil'yevich; SHPARAGA, I.I., inzh., retsenzent;
SERDYUK, V.K., inzh., red.

[Safety rules for operators of sand preparation machinery
casting shops] Pamiatka po tekhnike bezopasnosti dlia
rabochikh zemleprigotovitel'nykh mashin liteinykh tsekhov.
Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1958.
57 p. (MIRA 12:4)
(Founding--Safety measures) (Sand, Foundry)

SHPARAGO, I. I.

PA 195T55

USSR/Metals - Cast Iron, Casting Methods Mar 51

"Centrifugal Casting of Cast-Iron Bushings and Flanges," N. S. Massover, I. I. Shparago, Engineers

"Litey Proizvod" No 3, pp 31-34

Describes centrifugal machine with a horizontal axis of rotation, used for casting bushings and flanges at Kiev Mach Tool Bldg Plant imeni Gor'kiy, where rejection of these parts amounted to 30-40%. Centrifugal method sharply decreased rejection and improved quality of castings.

195T55

SHPARBER, I.

Using low-grade cements in making cement-sand roofing tiles.
Sill'.bud. 7 no.4:13 Ap '57. (MIRA 12:11)

1. Glavnyy inzhener Voroshilovgradslogo oblastnogo upravleniya
po stroitel'stvu v kolkhozakh.
(Voroshilovgrad Province--Tiles, Roofing)

L 6706-65 EWT(m)/EWP(q)/EWP(b) AFTC(p)/ASD(m)-3 JD

ACCESSION NR: AR4041667

46
S/0282/64/000/005/0002/0002

SOURCE: Ref. zh. Khimicheskoye i kholodil'noye mashinostroyeniye. Otd. vy*p.
Abs. 5.47.10

AUTHOR: Shreyder, A. V.; Shparber, I. S.; Varfolomeyev, V. V.

TITLE: Stratification of metal of vessel walls

CITED SOURCE: Bezopasnost' truda prom-sti, no. 1, 1964, 17-19

TOPIC TAGS: metal stratification, vessel wall, hydrogen penetration, hydrogen damage, metal surface impregnation

TRANSLATION: In the last 2 - 3 years in a number of enterprises of oil refining industry in vessel walls of separate technological apparatuses working with media containing hydrogen sulfide (to 1.5%) and moisture at temperatures from 30 to 50°C and pressures from 7 to 32 kgs/cm² there were repeatedly revealed cases of metal stratification, the formation on walls of bubbles and a large quantity of cracks. Cause of this phenomenon is thought to be penetration of hydrogen in steel. We considered the process of hydrogen damage of metal and conditions promoting the

Card 1/2

L 6706-65
ACCESSION NR: AR4041667

penetration of hydrogen in metal. We recommend measures undertaken to combat hydrogen destruction of metal of vessels divided into 2 basic groups: 1) measures founded on preventing of corrosion process which causes separation of hydrogen (deposition on vessel walls, from inside, of varnish and paint coverings) and 2) measures directed towards decreasing the degree of penetration of hydrogen in metal (introducing into the aggressive media polysulfides to decelerate the adsorption of hydrogen, or oxygen which causes transition of the sulfides present in aggressive media into polysulfides) Bibliography: 3 references

SUB CODE: MM

ENCL: 00

Card 2/2

SHREYDER, A.V., kand.tekhn.nauk; SHPARBER, I.S., inzh.; ZHUK, N.P., doktor
tekhn.nauk

Corrosive exfoliation of metals of petroleum-refinery low
temperature equipment. Khim. i neft. mashinostr. no.9:28-32
S '65. (MIRA 18:10)

SHPARBER, L. YA

✓ Knotty problems of regulation of operation of blast furnaces. L. Ya. Shparber (Izvet. Combine, Magnitogorsk). *Metallurg* 1956, No. 6, 3-7. -- Changes in slag compn. can result from drainage in the hearth, moisture in the blast, pressure of gas on furnace throat, quality of coke and chem. compn. of iron. Changes in distribution of gas flow point to sharply defined peripheral and channel flow that can be corrected by proper loading sequences. Changes of heating as a result of changes in quality and moisture of coke can be compensated for by reducing ore load. Y. M. Bednarski

Metall

1

SHPAREER, L.Ya.

Remote control of gas sampling along the radius of the shaft top.
Metallurg no.9:35-36 S '56. (MLRA 9:10)

1. Rukovoditel' tekhnologicheskoy gruppy domennogo ysekha Magnitogorskogo metallurgicheskogo kombinata.
(Blast furnaces) (Sampling) (Remote control)

330
group of combine.

Shparber, L.Ya.

AUTHOR: Shparber, L.Ya., Engineer.

130-12-7/24

TITLE: Insulated Heat-resisting Blowpipes for Blast Furnaces
(Ekranirovannye zharostoykiye sopla dlya domennykh pechey)

PERIODICAL: Metallurg, 1957, No.12, p.13 (USSR).

ABSTRACT: The author mentions that measurements at Magnitogorsk showed a 50 °C temperature drop in the blowpipe at a blast temperature of 850 °C and describes an insulated blowpipe designed and successfully introduced at the combine. This consists essentially of a seamless steel tube (6-7 mm wall thickness) inside which a stainless steel sleeve is fixed, the 32.5 mm gap being filled with a mixture of asbestos and slag wool. The use of such blowpipes has saved 34.5 °C of blast temperature and enables the mean temperature to be raised to 900 °C, (950 - 1 000 °C in some months) with improved blowpipe life and furnacemen's working conditions. A variant of the blowpipe without any insulating material in the gap is now under trial. There is 1 figure.

ASSOCIATION: Magnitogorsk Metallurgical Combine (Magnitogorskiy metallurgicheskiy kombinat)

AVAILABLE: Library of Congress
Card 1/1

AUTHORS: Lepikhin, L.A. and Shparber, L.Ya., Engineers SOV/133-58-6-5/33
TITLE: A New Method of Supply of Steam into the Space between
Bells of Blast Furnaces (Novyy sposob podachi para v
mezhkonusnyye prostranstva domennykh pechey)
PERIODICAL: Stal', 1958, Nr 6, p 503 (USSR).
ABSTRACT: An illustrated outline of a system of supply of steam
between small and large bells synchronised with charging side
is given. The system is in operation and an improved safety
and an economy in steam is claimed. The main feature - steam
is supplied only just before the opening and during the closing
of the large bell. There are 2 figures.
ASSOCIATION: Magnitogorskiy metallurgicheskikh kombinat
(Magnitogorsk Metallurgical Combine)
Card 1/1 1. Blast furnaces--Performance 2. Steam--Applications