30753. STULOV, N. N.

Kristally l'da. Zapiski Vsesoyuz. mineral. o-va, 2-ya seriya, 1949, vyp. 3, s. 172-76.

STULOV, N.N.

Twin intergrowths of cassiterite. Zapiski Vsesoyuz.Mineralog.
Obshchestva 82, 22-31 '53.   (MLRA 6:4)
(CA 47 no.17:8593 '53)

STULOV, N. N.

in the direction HII: S ... deos this exptl observation ... conditions of crystn on the walls of vents in which he ...

... exert the indirect effect ... with the country ... by paragenic induction effects, the ... particles in strongly undercooled melts.

W. Eitel

FERSMAN, Aleksandr Yevgen'yevich, 1883-1945; BELYANKIN,D.S., akademik,
   redaktor [deceased]; SHAFRANOVSKIY,I.I., prof., redaktor; STULOV,N.N.
   redaktor; SMIRNOVA,A.V., tekhnicheskiy redaktor

[Crystallography of diamonds] Kristallografiia almaza. Red.i kommen-
tarii D.S.Beliankina i I.Shafranovskogo. [Moskva] Izd-vo Akademii nauk
SSSR, 1955. 566 p.   (MIRA 9:1)
               (Diamonds)

USSR.

Products of high-temperature calcination of layer-structure silicates. V. I. Mikheev and N. N. Stuloy. Zapiski Vsesoyuz. Mineralog. Obshchestva 84, 3-29(1955).—The cryst. phases stable above 1050-1200° are γ-Al$_2$O$_3$, γ-Fe$_2$O$_3$, spinels, MgFe$_2$O$_4$, enstatite, clinoenstatite, mullite, and framework aluminosilicates. Anhydrous pyrophyllite appears as a remarkable meta structure between 900° and 1000°. The spinellides are decompn. products of muscovite, biotite, lepidomelane, glauconite, montmorillonite, and chlorites; γ-Al$_2$O$_3$ appears in m-kaolinite. Spinels, however, are not formed from phlogopite, talc, and pyrophyllite. All of the spinel-forming minerals are characterized by the groups [AlO$_4$] and(or) [FeO$_4$] in their layer structures, and [Fe^{II}O$_4$] is changed to [Fe^{III}O$_4$]. If intermediate amorphous metaphases are formed, e.g. in kaolinite or montmorillonite, spinels are the end products because the [AlO$_4$] groups are preserved. In pyrophyllite, however, no amorphisation occurs, and a real metastructure, not a spinellide, appears. Groups [AlO$_4$] are introduced together with [SiO$_4$], either into frameworks of aluminosilicates or into glasses; phlogopite is thus changed to olivine glass in which the K content is also contained. Similarly, talc is changed to enstatite; also in chlorites the end product is olivine, although in this case assocd. with spinel. The special spinel phase formed from a muscovite with 0.87% MgO had the elementary cell dimension a$_0$ = 7.895 kX; from Vegard's law applied for spinels enriched in Al$_2$O$_3$ it is concluded that the present "γ-Al$_2$O$_3$" phase contained 8 mols. Al$_2$O$_3$ combined with 3 mols. of MgAl$_2$O$_4$ (with a$_0$ = 7.965 kX). The

V. I. MИ́КНЕЕ́V

calcn. showed that 9% of this complex spinel crystd. from the decompn. products of the mica. The spinel in the calcination products of biotite is a nearly pure maghemite (γ-Fe_2O_3, with $a_3 = 8.369$ kX), while that derived from lepidomelane corresponds to $(Fe^{II}_{1.2}Fe^{II}_{3}\times 2.46)Fe^{III}_2O_4$ (with $a_3 = 8.324$ kX). For the detn. of the olivine among the decompn. products of phlogopite the parameter $b = 10.470$ kX is characteristic for its compn. ($Mg_{0.6}Fe^{II}_{0.44})_2SiO_4$. The magnesioferrite from glauconite is nearly pure $MgFe_2O_4$ ($a_3 = 8.369$ kX); the spinel from "Kil" (montmorillonite) is $MgAl_2O_4(a_3 = 8.108$ kX) contg. a slight amt. of Fe^{3+}. Unexplained is the occurrence of some strong lines in the powder diagram which, in cubic indexing, corresponds with $a_3 = 14.17$ kX to a doubled cristobalite structure, but this mineral could not be identified in larger amts. in microscopic examn.; $n = 1.685$. The spinel in the decompn. products of chlorite has $a_0 = 8.104$ kX, corresponding to about $(Mg_{0.6}Fe^{II}_{0.4})Al_2O_4$, with some substitution of Al^{3+} by Fe^{3+}. About half the amt. of the spinel, there is an olivine with $b_3 = 10.470$ kX$(Mg_{0.56}Fe^{II}_{0.44})_2SiO_4$. The decompn. products of talc do not entirely correspond to enstatite or clino-

I. I. Mikheev

enstatite (cf. Ewell, et al., C.A. 30, 1700[4]). The mullite formed from kaolinite at 1270[0] was accurately indexed in the powder diagram by using the parameters given by Betekhtin (*Mineralogy*, 1950 (C.A. 47, 6318c)) ($a_0 = 7.49$; $b_0 = 7.63$; $c_0 = 5.74$ kX), but the authors find in a revision that c_0 is doubled ($= 11.630$ kX). Also a small amt. of α-cristobalite was detd.; the γ-Al$_2$O$_3$ formed at 900[0] is pure (with $a_0 = 7.90$ kX), equal to that produced by the calcination of NH$_4$ alum. Pyrophyllite shows after calcination at 900[0] only a slight swelling of the elementary cell dimensions, with somewhat less sharp interference lines (the line with d. = 4.40 kX is the strongest); a true metaphase with $a_0 = 5.068$; $b_0 = 8.910$; $c_0\sin\beta = 18.51$ kX; $\beta = 100^\circ$ is identified, which at 1200[0] is changed into mullite, and shows at 1000[0] some mullite with the metaphase mixed, perhaps with some γ-Al$_2$O$_3$ (indicated by some weak lines).

W. Eitel

$\frac{3}{3}$

STULOV, N. N.

Mineral formation in natural electric fields. V. [...]
Mokievs..., N. N. Stulov, and I. G. Talankina [...]
[...] Geokhimiya 87. 80-82 1956. cf.

oxidation-reduction potentials may contribute to the forma-
tion of secondary minerals. The amts. of dissolved mate-
rial at a given time may be very low, but the time factor of
galvanic actions may bring about considerable changes in the

coal-bearing schists and limestones of Upper Silurian, or

MOKIYEVSKIY, V.A.; STULOV, N.N.; TSIGEL'MAN, I.S.

Mineralization in a natural electrical field. Zap.Vses.min.ob-va
85 no.1:39-48 '56.   (MIRA 9:7)
          (Mineralogical chemistry)

STALEV, N. N.

and N. N. Staliov, Zapiski ....

STULOV, N.N.; SHAFRANOVSKIY, I.I.; LAZARENKO, Ye.K.

Viktor Ivanovich Mikheev; obituray. Min.sbor. no.11:403-406
'57.   (MIRA 13:2)
            (Mikheev, Viktor Ivanovich, 1912-1956)

TATARSKIY, V.B.; FRANK-KAMENETSKIY, V.A.; BURAKOVA, T.N.; NARDOV, V.V.;
        PETROV, T.G.; KONDRAT'YEVA, V.V.; KAMENTSEV, I.Ye.; CHERNYSHEVA,
        V.F.; ALEKSEYEVA, N.P.; ARTSYBASHEVA, T.F.; BARANOVSKAYA, N.I.;
        BUSSEN, I.V.; VEREMETSKO, I.A.; GREVUSHEV, M.A.; GOTKO, Ye.A.;
        KOMKOV, A.I.; KOTOVICH, V.A.; LITVINSKAYA, G.P.; MIKHEYEVA, I.V.;
        MOKIYEVSKIY, V.A.; PETROVA, L.V.; POPOV, G.M.; SAFRONOVA, G.P.;
        SOBOLEVA, V.V.; STULOV, N.N.; TUGARINOVA, V.G.; SHAFRANOVSKIY, I.I.;
        SHTERNBERG, A.A.; YANULOV, K.P.

O.M. Ansheles; obituary. Vest. LGU 12 no.18:152-154 '57.(MIRA 11:3)
                (Ansheles, Osip Markovich, 1885-1957)

AUTHOR: Shafranovskiy, I.I. and Stulov, N.N.   70-2-1/24

TITLE: Viktor Ivanovich Mikheev - Obituary

PERIODICAL: "Kristallografiya" (Crystallography), 1957, Vol.2, No.2, pp. 203-206 (U.S.S.R.)

ABSTRACT: Professor Mikheev died suddenly in December, 1956 at the age of 45. He became interested at a very early age in crystallography. In March, 1936, he defended successfully his dissertation "Standard Debye rings of cast stone minerals". In the same year, he became "Dozent" of the Chair of Crystallography and lecturer on the course of general crystallography and X-ray investigation of crystals. Except for his military service during the war, he was associated throughout his life with the Mining Institute (Gornyy Institut). He published over 75 scientific papers and, in addition, he wrote 56 scientific reports on investigations of individual minerals and their groups carried out for various scientific and industrial establishments. For identifying the composition of mixtures and of minerals, the Debye Scharrer method was considered the most appropriate but, for this purpose, it was necessary to compile and arrange in their definite order the data calculated from minerals to be used as standards. This enormous task was materialised by publishing the "Roendgenometric" determination

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Viktor Ivanovich Mikheev - Obituary. (Cont.)   70-2-1/24

of minerals, the first part of which contains data for 142, the second part for 146 minerals; the third

for 90; minerals was put into print shortly before the death of Professor Mikheev. In addition to the colossal work involved in compiling the above mentioned book, Mikheev carried out roendgenometric investigations of individual minerals and their groups, and the results of this work were published in individual papers. It is largely due to his work that roendgenometric diagnosis of minerals is so successfully used in the Soviet Union. From 1950 onwards, Prof. Mikheev published numerous papers on homology problems and later on he published the monograph "Homology of Crystals" which also served as a doctor dissertation (in 1952). His work on homology was highly valued by the Soviet Ac.Sc. and he was awarded in 1950 the E.S. Fedorov prize for this work. Mikheev produced 218 types of homology and these allowed accurate classification and systemisation of crystals with low degrees of symmetry. The work on homology enabled solution of the practically important problem of identifying the Debye rings of low symmetry substances. In 1953, Mikheev was nominated Professor of the Crystallography Chair.

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AVAILABLE: Library of Congress

STULOV, N.N.; SHAFRANOVSKIY, I.I.; MOKIYEVSKIY, V.A.; POPOV, G.M.; BETEKH-
    TIN, A.G.; NIKOLAYEV, V.A.; ANSHELES, O.M.; GRIGOR'YEV, D.P.;
    YEROFEYEV, B.N.; TATARSKIY, V.B.; SOLOV'YEV, S.P.; NIKITIN, V.D.;
    RUDENKO, S.A.; DUBININA, V.N.; ALYAVDIN, V.F.; VLADIMIROV, B.N.;
    KAZITSYN, Yu.V.; FRANK-KAMENETSKIY, V.A.; KALININ, A.I.; BALA-
    SHOVA, M.N.; SAL'DAU, E.P.; DOLIVO-DOBROVOL'SKAYA, G.M.; LAV-
    RENT'YEV, M.F.

    Viktor Ivanovich Mikheev, Zap. Vses. min. ob-va 86 no.2:317-320
    '57.   (MIRA 10:6)
                (Mikheev, Viktor Ivanovich, 1912-1956)

STULOV, N.N.; SHAFRANOVSKIY, I.I.

Achievements in Soviet crystallography.   Zap.Vses.min.ob-va 86
no.5:595-606 '57.   (MIRA 10:10)
                                    (Crystallography)

BALASHOVA, M.N.; SAL'DAU, E.P.; STULOV, N.N.

The Fedorov anniversary session. Zap.Vses.min.ob-va 86 no.5:632-639
'57.   (MIRA 10:10)

(Mineralogy)

SOV/70-3-5-23/24

AUTHORS: Shafranovskiy, I.I., Stulov, N.N., Tatarskiy, V.B. and Frank-Kamenetskiy, V.A.

TITLE: Certain Observations in Connection with the Article of Academician N.V. Belov "On a Course of Geometrical Crystallography for Physicists" (Neskol'ko zamechaniy po povodu stat'i Akad. N.V. Belova "O kurse geometricheskoy kristallografii dlya fizikov")

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 5, pp 637-638 (USSR)

ABSTRACT: Complaints by Leningrad mineralogists against the excessive physical bias by Belov in his article. There are 4 references, 2 of which are Soviet and 2 German.

ASSOCIATION: Leningradskiy gornyy institut. Leningradskiy gosudarstvennyy universitet. (Leningrad Mining Institute and Leningrad State University)

SUBMITTED: May 23, 1958

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SOLOV'YEV, S.P.; STULOV, N.N.

        Second all-Union conference on petrography. Zap. Vses. min. ob-va
        87 no.5:618-624 '58.   (MIRA 12:1)
                (Petrology)

STULOV, N.N.; SHAFRANOVSKIY, I.I.

Crystallography and mineralogy in the Leningrad Mining Institute.
Zap. LGI 40:22-28 '59.   (MIRA 14:5)
      (Leningrad—Crystallography—Study and teaching)
            (Leningrad—Mineralogy—Study and teaching)

SHAFRANOVSK1Y, I.I.; MOKIYEVSKIY, V.A.; STULOV, N.N.

Discussion on the nomenclature of crystallographic forms at the
French Mineralogical Society. Zap.Vses.min.ob-va 88 no.4:492-495 '59.
(MIRA 12:11)

1. Deystvitel'nyye chleny Vsesoyuznogo mineralogicheskogo obshchestva.
(Crystallography--Terminology)

STULOV, N.N.; SHAFRANOVSKIY, I.I.

New materials on the active life of E.S. Fedorov; on the 40th
anniversary of his death. Zap. Vses. min. ob-va 88 no.5:578-582
'59.   (MIRA 13:2)
        (Fedorov, Evgraf Stepanovich, 1853-1919)
        (Crystallography)

STULOV, N.N.

"Zapiski" of the Tajik Division of the All-Union Mineralogical
Society. Zap. Vses. min. ob-va 88 no.6:733 '59.
(MIRA 13:8)
(Tajikistan--Mineralogy--Periodicals)

SHAFRANOVSKIY, I.I., prof. Prinimali uchastiye: MOKIYEVSKIY, V.A.; STULOV,
    N.N.; GENDELEV, S.Sh.; PIS'MENNYY, V.A.; BALASHOVA, M.N.; MIKHEYEVA,
    I.V.; SAL'DAU, E.P.; KALININ, A.I.; DOLIVO-DOBROVOL'SKAYA, G.M.
    PIOTROVSKIY, G.L., dotsent, otv.red.; FURMAN, K.P., red.; MALYAVKO,
    A.V., tekhred.

[Lectures on the morphology of mineral crystals] Lektsii po kristal-
lomorfologii mineralov. L'vov, Izd-vo L'vovskogo univ., 1960.
161 p.   (MIRA 14:1)

1. Kafedra kristallografii Leningradskogo gornogo instituta (for
Mokiyevskiy, Stulov, Gendelev, Pis'mennyy, Balashova, Mikheyeva,
Sal'dau, Kalinin, Dolivo-Dobrovol'skaya).
    (Minerals)   (Crystals)

89338

$3,1550(1057,1062,1129)$

S/534/60/000/019/002/005
D226/D302

AUTHOR: Stulov, N.N.

TITLE: The roentgenometric study of the material composition
             of certain meteorites

PERIODICAL: Akademiya nauk SSSR. Komitet po meteoritam.
             Meteoritika, no. 19, 1960, 63-84

TEXT: This study was carried out in collaboration with Professor
V.I. Mikheyev, and had two objectives in its first stage: a) to
determine the mineral composition of certain meteorites from the
collection at the Gornyy Muzey (Mountain Museum) and b) to in-
vestigate specially selected mineral parts of meteorites, forwar-
ded to the laboratory by L.G. Kvasha from the Committee for Meteo-
rites of the AS USSR. By undertaking these tasks the author aimed
at improving the method of identification of minerals and at de-
veloping standard roentgenograms for them. In the last stage of

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The roentgenometric study of ...

this study the aim was to work out a series of tables recording
X-ray crystallographic data for all minerals present in meteorites.
Unfortunately the death of V.I. Mikheyev prevented realization of
this project. The present article is an account of those roent-
genometric studies which were actually conducted with the de-
ceased. Method of investigation: Samples of iron meteorites from
the Gornyy Muzey were taken by means of filing or drilling with
a hard bore; samples given by L.G. Kvasha were already pulverized.
Sometimes they were ground additionally to give particles, rang-
ing from 0.01 - 0.001 mm. A column of the material was then
pressed in a glass tube (diameter: 0.8 mm). Two X-ray photographs
were taken of each sample, one of the pure material the second
of its mixture with rock-salt. Distances between symmetric lines
were measured with a 0.5 mm ruler (an average of 3 measurements
were taken for every pair of lines). The intensity of lines was
evaluated visually and photographs were taken with a camera 143
mm in diameter in a Haddings ionic tube with an iron anticathode.

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The roentgenometric study of ...

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The following wave-lengths were used for calculations:

$$\lambda_{K\alpha_1} = 1{,}936012 kX; \quad \lambda_{K\alpha 2} = 1{,}932076 kX;$$

$$\lambda_{K\beta} = 1{,}753013 \ kX,$$

where kX = Kilo XU. Some modifications of X-ray photography were used: a) The films were placed in such positions that their ends did not point toward the incoming diaphragm, but in the reverse direction; in this way, lines formed by broad reflection angles were situated in the center of the film; b) Reflection angles were measured with a precision of up to 0.1'; c) the calculation of lattice distances were according to the Bragg-Wulf formula; d) Considerable quantities of rock-salt were added to the samples (up to 60 %) to obtain more definite standard lines for the salt; these lines were used for correcting the obtained data. The time of exposure for iron-meteorite samples was 8 ma. x 4.5 hours.

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The roentgenometric study of ...

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X-ray photographs of other samples were made with a camera of
68 mm in diameter with an iron anticathode, the radiation wave
lengths being as follows: $\lambda_{K\alpha}$ = 1,934 kX; $\lambda_{K\beta}$ = 1,753 kX;

time of exposition 8 ma. x 2 hours, or 3.5 hours. I. Iron meteor-
ites: The following minerals were found and submitted to X-ray
study. Camasite and Tenite from Sikhote-Alinskiy, Coahuila, Hex
River Mountains, Chestervill, Sao Juliao de Moreira, Carlton,
Tazewell and Bodaybo meteorites. Hydrohetite and Hydrohematite
from the melted surface layer of Tazewell meteorite. Chromite,
Troilite, Schreibersite and Radbite from the Sikhote-Alinskiy me-
teorite. For the study of Camasite and Tenite, information given
in the article of A. Bradley, A. Jay, A. Taylor (Ref. 13: "On the
Lattice Spacing of Iron-Nickel Alloys", Philosophical Magazine
and Journal of Science, 23, no. 155, 547-557, 1937) was used.
V.I. Mikheyev (Ref. 9: Rentgenometricheskiy opredelitel'mineralov
/Roentgenometric Determinant of Minerals/ Zap. Vsesoyuzn. Minera-
log. obshchestva, part. 86, no. 2, 1957) investigating some iso-

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morphic series observed that the increase in dimensions of the
unit cell is a linear function of the radius of present cations.
He proposed the following equation for the dependence of the
camasite lattice dimension on its content in nickel:
$a = 2.86124 + 0.00041 x$, where x equals the atomic percentage of
Ni. For this equation Mikheyev used data from E.R. Jette and F.
Foote (Ref. 14, "X-ray study of iron nickel alloys", Am. Inst.
min. metallurg. Engin. Techn. Publ., no. 670, Metal Technology 3,
1, 14, 1936). The contents of Ni in Camasite calculated from
Bradley's graph and those suggested by Mikheyev, do not agree,
the figures according to Mikheyev being more than 20 % higher.
These discrepancies may be explained by the fact that Bradley
studied artificial iron nickel alloys, whereas Mikheyev dealt
with natural minerals, in which -- apart from Fe and Ni -- some
Co and Cu were also present, as was shown by M.U. D'zakonova,
who carried out the entire chemical analysis of minerals from
the Sikhote-Alinskiy meteorite. (Ref. 2: Khimicheskiy sostav

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Sikhote-Alinskogo meteorita /Chemical Composition of the Sikhote-Alinskiy Meteorite/ Meteoritika, 16.1958). Chemical data for all further mentioned minerals were taken by the author from this study. Tenite was not found in the Sikhote-Alinskiy meteorite, but was present in the Chestervill, Sao Juliao, Carlton, Tazewell and Bodaybo meteorites. To identify it, data from Mikheyev's tables were used (Ref. 8: Rentgenomentricheskiy opredelitel' mineralov /Roentgenometric Determinant of Minerals/ Gosgeolizdat 1957). Finally, the author expresses the opinion that at present it is impossible to quantitatively determine in any precise manner the components of iron nickel meteorites by unit cell dimensions, although it has been found that: a) when the unit cells of Camasite are small, those of Tenite are large; their dimensions can be much larger than those of artificial alloys; b) with the increase in Tenite content, the lattice spacing of Camasite increases and that of Tenite decreases. However, the author adds that these conclusions are not certain in view of the small num-

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ber of specimens studied. Therefore further studies are necessary.
A sample from the melted surface layer of the Tazewell meteorite
gave 50 lines on the X-ray film. 22 of these correspond to Hydro-
tite, 13 to Hydrohematite, 6 to Camasite, 5 to Tenite, 10 weak
lines were not identified. The lattice spacing of Camasite and
Tenite in the sample was the same as in the bulk of the meteo-
rite. All other minerals mentioned belong to the Sikhote-Alinskiy
meteorite: 1) Chromite, having the chemical composition (weights
given in percentage): $FeO-15.91$ %; $Cr_2O_3-71.23$ %; $MgO-11.87$ %;
(Total 99.ol %). The roentgenogram showed that there was in this
sample Chromite with a lattice constant: $a = 8.329 \pm 0.001$ kilo
XU and Chromite, with the formula $3Cr_2O_3 \cdot Fe_2O_3$, the formula of

the first Chromite being $(Mg,Fe)Cr_2O_3$ in accordance with

Mikheyev's study on spinels, (Ref. 9: op.cit.). A mineral with
a formula $3Cr_2O_3 \cdot Fe_2O_3$ has never been found before either on

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earth or in meteorites. Its identification was made on the basis
of data in the first supplement to the American roentgenometric
card-file These data are based on work of P.F. Wretblad, who
studied a synthetic substance having the above composition. (Ref.
15: Z. f. Anorg. Chem., 189, 331, 1930). 2) <u>Troilite</u>, having the
following chemical compositions for 3 different samples (weights
given in percentage): Fe-60.78 %; Cu-0.04 %; S-36.41 %; Cr-2.08 %,
(Total 99.31 %); Fe-62.46 %; Cu-0.05 %; S-34.65 %; Cr-1.06 %,
(Total 98.22 %); Fe-62.84 %; Cu-0.07 %; S-34.33 %; Cr-1.08 %,
(Total 98.32 %). X-ray study proved the presence of 2 compounds,
one a pure Troilite, the other a mixture of Troilite plus some
Chromite, with lattice distances: a = 8.344 ± 0.004 kilo XU,
which corresponds to the formula $FeCr_2O_4$. The lattice constants
of pure Troilite were: a = 5.965 kilo XU and c = 11.538 kilo XU.
3) <u>Schreibersite</u> was found in another sample of the same meteo-
rite. Its composition is (weights given in percentage):
Fe-69.73 %; Ni-14.64 %; Co-0.18 %; P-15.64 %, (Total

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100.19 %). Cristallographic data for its identification were taken from a work of A.G. Betekhtin (Ref. 1: Mineralogiya /Mineralogy7 Gosgeolizdat, 1950), its lattice constants being: a = 9.065 ± 0.002 kilo XU and c = 4.444 kilo XU. The last mineral identified from the same meteorite was 4) Radbite, which belongs to the same isomorphic mineral series as Schreibersite. Its Ni and P contents are smaller than those of Schreibersite, being 29.8 % and 15.2 % (weights given in percentage) respectively. The lattice constants of Radbite were determined as: a = 9.022 ± 0.004 kilo XU and c = 4.424 kilo XU. 5) Carbonaceous Chondrites were studied from samples of the meteorites "Cold Bokkeveld", "Staroye Boriskino" and "Orgueil". This kind of mineral was found in all three meteorites and has the same lattice dimensions as the mineral found in the meteorite Migei, described in the work of V.I. Mikheyev and A.I. Kalinin. (Ref. 10: Primeneniye rentgenometricheskogo metoda k issledovaniyu veshchestvennogo sostava meteoritov /Use of the Roentgenometric
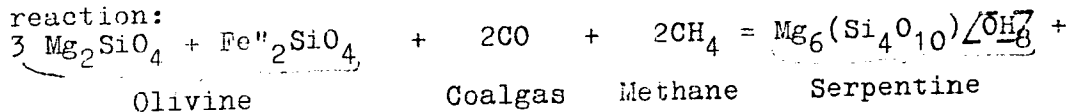
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The roentgenometric study of ...

Method for Investigating the Material Composition of Meteorites/
Meteoritika, no. 15, 1957), It was impossible to determine its
chemical composition, but in the opinion of Mikheyev (Ref. 10:
op.cit.) this mineral is nearest to serpentine of the antigorite
type and contains a fair amount of bivalent iron (Abstractor's
Note: Lattice constants not given). The carbonaceous matter in
these meteorites is apparently amorphous. In the last part of
the article the author discusses the presence of hydrosilicates
in meteorites. He quotes Mikheyev's opinion that these silicates
are formed from olivine, not by action of water, but by the ac-
tion of carbon oxide and methane, and suggests the following
reaction:

$$3 Mg_2SiO_4 + Fe''_2SiO_4 + 2CO + 2CH_4 = Mg_6(Si_4O_{10})[OH]_8 +$$

     Olivine   Coalgas   Methane   Serpentine

$+ 4C + 2Fe.$
If the ratio of components were different certain minerals could

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The roentgenometric study of ...

S/534/60/000/019/002/005
D226/D302

be formed instead of metallic iron such as magnetite. It follows from this reaction schemati⌐ that the ratio of water: carbon in carbonaceous meteorites should be definite: There, in fact, must be 4 molecules of H_2O for every 4 atoms of carbon; the ratio of corresponding weights being 4 x 18 : 4 x 12 = 72 : 48 = 1.5. G. Boato found that the actual ratios of water and carbon in carbonaceous meteorites were in the range: 1.13 - 2.0, i.e. an average of 1.42 (Ref. 12: "The Isotopic Composition of Hydrogen and Carbon in the Carbonaceous Chondrites", Geochim. et Cosmochim. acta, 6, 209-220, 1954). These data give support to Mikheyev's opinion. The author suggests that the above described reaction should be performed on a laboratory scale -- this, says the author, should not present any technical problems -- and the reaction products be carefully examined. In conclusion the author emphasises the need to work out roentgenometric-crystallographic data tables for minerals. Such tables are of great importance for the study of meteorites in view of the minute quantities of ma-

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The roentgenometric study of ...   S/534/60/000/019/002/005
                                          D226/D302

terial with which the investigator very often has to deal. Labora-
tory technician A.I. Kalinin also participated in the work des-
cribed above. There are 2 figures, 13 tables and 16 references:
11 Soviet-bloc and 5 non-Soviet-bloc. The references to the Eng-
lish-language publications read as follows: A. Bradley, A. Jay,
A. Taylor. "On the Lattice Spacing of Iron-Nickel Alloys", Philo-
sophical Magazine and Journal of Science, 23, no. 155, 547-557,
1937; E.R. Jette, F. Foote, "X-ray Study of Iron Nickel Alloys,
Am. Inst. min. metallurg. Engin. Techn. Publ., no. 670, Metal.
Technology 3, 1, 14, 1936; X. R.D.C. II Am. Soc. of Testing Ma-
terials. First supplementary Card File of X-ray diffraction Data,
1945.

Card 12/12

STULOV, N.N.

Relationship between the crystalline texture, temperature, and
heat of fusion of simple solids. Zap.Vses.min.ob-va 89 no.2:
143-151 '60.   (MIRA 13:7)

1. Deystvitel'nyy chlen Vsesoyuznogo mineralogicheskogo
Obshchestva. Kafedra kristallografii Leningradskogo gornogo
instituta.
          (Metal crystals--Thermal properties)

SHAFRANOVSKIY, I.I.; STULOV, N.N.; MOKIYEVSKIY, V.A.

In memory of Viktor Ivanovich Mikheev. Zap. LGI 38:3-8 '61.
(MIRA 15:1)
(Mikheev, Viktor Ivanovich, 1912-1956)
(Bibliography--Mikheev, Viktor Ivanovich, 1912-1956)

STULOV, N.N.

Review of the unpublished scientific works of V.I.Mikheev. Zap.
LGI 38 no.2:9-25 '61.   (MIRA 15:1)
               (Mikheev, Viktor Ivanovich, 1912-1956)
          (Bibliography--Mikeev, Viktor Ivanovich, 1912-1956)

ALYAVDIN, V.F.; VASIL'YEVA, L.F.; VITOSHINSKAYA, M.I.; GRIGOR'YEVA, L.N.;
        GODLEVSKIY, M.N.: ZHERBINA, K.M.; ZHEZEZKOVA, V.H.; KISELEVA, A.H.;
        KOZYREVA, Yu.A.; KULIKOV, K.V.; PAFFENGOL'TS, K.N.; POLEVOY, B.F.;
        SOLOV'YEV, S.P.; STULOV, H.H.; SHAFRANOVSKIY, I.I.

In memory of A.V.Nemilovoi. Zap.Vses.min.ob-va 90 no.6:756-757
'61.   (MIRA 15:2)
                (Nemilova, Aleksandra Vasil'evna, 1892-1961)

STULOV, N.N.

"Homology of crystals" by V.I.Mikheev reviewed by N.N.Stulov. Zap.
Vses. min. ob-va 91 no.1:123-124 '62.   (MIRA 15:3)
            (Crystallography) (Mikheev, V.I.)

STULOV, N.N.; SHAFRANOVSKIY, I.I.

V.I. Vernadskii on the symmetry of nature. Zap. Vses. min. ob-va 92 no.5:579-586 '63.   (MIRA 17:1)

STULOV, N.N.

Correlation of the heat capacity and the heat of fusion in
elements. Zap.Vses.min.ob-va 93 no. 2:121-125 '64. (MIRA 17:6)

1. Kafedra kristallografii Leningradskogo gornogo instituta,
problemnaya laboratoriya.

TATARINOV, P.M.; MOROZENKO, N.K.; SOLOV'YEV, S.P.; STULOV, N.N.;
RUNDKVIST, D.V.

Grigorii Sergeevich Labazi, 1898-1953; an obiturary.
Zap. Vses.min. ob-va 93 no. 2:245-246 '64. (MIRA 17:6)

STUHOV, N.H.

Form of atomic spheres and their closest packing in crystal structures. Zap. Vses. min. ob-va 93 no.3:260-265 '64.
(MIRA 18:3)

1. Leningradskiy gornyy institut, kafedra kristallografii. Problemnaya laboratoriya.

STULOV, N.N.

Work of the editorial board of the journal "Zapiski Vsesoiuznogo mineralogicheskogo obshchestva" in 1957-1963. Zap. Vses. min. ob-va 93 no.5:506-509 '64.   (MIRA 17:11)

SHAFRANOVSKIY, I.I.; SOLOV'YEV, S.P.; STULOV, N.N.

100th anniversary of the Department of Geology of the Franko Lvov
University. Zap.Vses.min.ob-va 93 no.6:735-736 '64.

(MIRA 18:4)

STULOV,T.T.; TRUSOV,L.P.

Use of precast concrete elements in water supply pumping stations.
Vod.i san.tekh. 1 no.1:14-16 Ap'55.   (MLRA 8:11)
    (Pumping stations) (Precast concrete construction)

BALASHOV, A.I., STULOV, T.T.(Moskva)

Water cleaning installation for oil field flooding.Stroi.pred.neft.
prom. 1 no.9:6-10 N '56.   (MIRA 10:1)

1. Zamestitel' glavnogo inzhenera Giprospetsnefti (for Balashov).
2.Glavnyy konstruktor Giprospetsnefti (for Stulov)
 (Oil field flooding) (Water--Purification)

STULOV, T.T., inzhener.

Underground reinforced concrete storage tanks for petroleum products.
Stroi. pred. neft. prom. 2 no.2:1-5 F '57.   (MIRA 10:4)
    (Petroleum--Storage)   (Reinforced concrete construction)

STULOV, T.T., inzh.

Results of the All-Union contest on "Standard designs of precast reinforced tanks with a capacity of 5000 M^3 for light petroleum products." Stroi. truboprov. 3 no.7:26-30 Jl '58.   (MIRA 12:1)
(Tanks) (Precast concrete construction)

SOV/95-59-6-5/12

14(10)

AUTHORS: Stulov, T.T. and Trusov, L.P., Engineers

TITLE: New Designs of Underground Small Capacity Reinforced Concrete Reservoirs
             for Oil Products

PERIODICAL: Stroitel'stvo truboprovodov, 1959, Nr 6, pp 15 - 17 (USSR)

ABSTRACT: The Institute Giprospetspromstroy has worked out standard designs for
             typical reinforced concrete reservoirs of 100 and 200 cu m capacity.
             Reservoirs (arch Nr T-1164 and T-1165) for light oil products and
             lubricants consist of a metal lining and gunite wall. The article
             describes and illustrates this simple design and inexpensive con-
             struction. After the metal lining is put in place and welded to the
             base plate to form a reservoir, it is filled with water and covered
             on the outside with gunite; the necessary equipment is mounted on 4
             manhole metal covers. The gunite wall thickness is 6 cm for the 100 cu m
             reservoir and 8 cm for the 200 cu m reservoir. - Designs for reservoirs
             (arch Nr T-1160 and T-1161) for dark oil products provide for prestressed
             concrete reinforcement. The novelty of this method consists in the tight
             winding under stress of the wire round the cone-shaped surface of the
             reservoir. The wire does not touch the reservoir itself but passes over

Card 1/2

STULOV, T.T.

Using precast concrete in water supply and sewerage structures.
Vod. i san. tekh. no.8:10-16 Ag '61.   (MIRA 14:9)
                    (Sanitary engineering)
                (Precast concrete construction)

STULOV, T.T.

Determining the bending moment in the supporting section of a wall
of precast reinforced concrete cylindrical storage vessels.
Izv. vys. ucheb. zav.; neft' i gaz. 7 no.10:105-111 '64.
(MIRA 18:2)
1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
im. akad. I.M. Gubkina.

L 63755-65   EWT(d)/EWP(1)/EWA(h)   IJP(c)   BC

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.

AUTHOR: Stulov, V. A.

TITLE: Frequency-type supervisory-control systems

CITED SOURCE: Tr. Kievsk. politekhn. in-ta, v. 42, 1963, 86-96

TOPIC TAGS: frequency remote control system, remote control code, supervisory control

TRANSLATION. The noise-immune codes used in the frequency-type telesystems are considered. The encoder and decoder are described for the simplest of alternating-quality codes, the 2-packet 3-frequency code. The most noise-immune code of this type is the

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L 63753-65

ACCESSION NR: AR5003349

alternating-quality permutation code. It can detect a number of errors in the code combination and, hence, can be used in the high-noise channels. A decoder for this code is described to correlate alternating-quality code and also group-selection

characterize the telecontrol-equipment capacity depending on the code type and the number of frequencies in the packet. The alternating-packet and the alternating-quality codes have the highest capacity. Other codes have the same numbers

Card 2/2

STULOV, V.A., inzh.

    Static interference rejection of changeable transmission
    group codes. Izv. vys. ucheb. zav.; energ. 7 no.2:23-30
    F '64.   (MIRA 17:3)

    1. Kiyevskiy ordena Lenina politekhnicheskiy institut.
    Predstavlena kafedroy avtomatiki i telemekhaniki.

29213
S/102/61/000/005/005/005
D274/D302

$9.7500 (1024)$

AUTHORS: Skyrta, B.K., and Stulov, V.A. (Kyyiv)

TITLE: Sequential magnetic decoder

PERIODICAL: Avtomatyka, no. 5, 1961, 73 - 76

TEXT: A decoder incorporating magnetic elements with a rectangular hysteresis-loop is described. It is destined for contactless frequency systems in remote control. The decoder operates on a two-code signal, having two frequencies which follow each other in time. The advantage of such a decoder over other ferrite-diode decoders consists in that it no longer requires a special switching element for signal reception. The decoder incorporates toroidal ferrite cores. A block diagram of the decoder is shown. Each core has 5 windings. Winding 1 serves for remagnetizing the core from state 0 to 1; winding 2 serves for counting, it changes the core from 1 to 0; counting takes place only when the core is remagnetized from 1 to 0, by means of diodes in the circuits of windings 4 and 5; windings 4 and 5 are output windings which connect the in-

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Sequential magnetic decoder

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D274/D302

dividual triggers of the controlled object. The frequency pulse ar-
rives at the filter inputs and after filtering and rectifying --
at the input of the Schmitt trigger (limiter); thereupon, the pul-
se is amplified and applied to the magnetic decoder. The key trio-
des KO and KC are controlled by a univibrator which operates on
transmission of the first code (indicating the character of the
operation). Thereupon, one of the keys (KC) is opened, and the
other (KO) -- closed. The first code arrives at the corresponding
terminal of the decoder input. The following signal is applied to
the second input-terminal (after passing through the key-amplifier)
The cores of windings 2 (which are placed horizontally) are con-
nected in series with the windings 1 of the cores which are remag-
netized. Assume the pulse is applied to the fifth terminal; then
the vertical series of cores (of winding 1) which correspond to
that terminal, are remagnetized from 0 to 1; the horizontal series
w_2 does not change its state with the exception of core 4 which
changes from 1 to 0; thereby, a pulse is applied from its windings
4 and 5 to the corresponding control trigger. After the informa-

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S/102/61/000/005/005/005
Sequential magnetic decoder   D274/D302

tion, contained in the code, has been received, conversion takes
place by means of the conversion winding 3 with which every core
is equipped. After the conversion, the decoder re-assumes its ini-
tial position, i.e .state 0 in every core. There are 3 figures.

SUBMITTED: March20, 1961

Card 3/3

KATKOV, F.A., kand.tekhn.nauk; STULOV V.A., inzh.

Alternate-message frequency code and its realization.
Izv. vys. ucheb. zav.; energ. 5 no.10:22-32 O '62.
(MIRA 15:11)

1. Kiyevskiy ordena Lenina politekhnicheskiy institut.
Predstavlena kafedroy avtomatiki i telemekhaniki.
    (Remote control)   (Telecommunication)

SMIDOVICH, V.A., inzh.; ZHAK, V.Z., inzh.; SKIRTA, B.K., inzh.; STULOV, V.A.,
        inzh.

        Experience in operating a frequency remote control system and a
        signaling system. Elek.sta. 33 no.2: 72-75 F '62.   (MIRA 15:3)
                        (Telemetering)(Remote control)

KATKOV, Fedor Aleksandrovich, kand. tekhn. nauk. Prinimali ucha-
stiye: STULOV, V.A., inzh.; POPOV, A.B., inzh.; DIDYK,
B.S., inzh.; SHESTOPALOV, V.N., kand. tekhn. nauk,
retsenzent; PISARENKO, M.G., inzh., red.izd-va;
STARODUB, T.A., tekhn. red.

[Teoretical principles of remote control] Teleupravlenie;
osnovy teorii. Kiev, Gostekhizdat USSR, 1963. 231 p.
                                        (MIRA 16:11)
        (Remote control)

STULOV, V.A. (Kiyev)

Concerning some definitions and classifications of codes.
Avtomatyka 8 no.1:63-66 '63.   (MIRA 16:3)
        (Information theory) (Automatic control)

L 1051-66   EWT(d)

ACCESSION NR: AR5006541   S/0274/64/000/012/A015/A015
                                           621.391.15

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Sv. t., Abs. 12A75

AUTHOR: Stulov, V. A.

TITLE: Code-combination structure

CITED SOURCE: Tr. Kiyevsk. politekh. in-ta, v. 42, 1963, 78-85

TOPIC TAGS: code, code combination, code structure

TRANSLATION: Definitions are offered for several concepts characterizing the structure of the code combinations that constitute a code. Each combination comprises one- or multi-element sendings whose number and sequence are determined by the code algorithm (the elements are transmitted simultaneously). The code element is a distinct elementary portion of the sending; the element is active if it carries usable information (which was in the message before its transmission); the element is passive if it carries ancillary information (which is added to the usable information for service purposes). The sendings are active if all

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ACCESSION NR: AR5006541

their elements are active; mixed, if only a portion of the elements is active; passive, if all their elements are passive. In a code combination, the sendings form rows sequentially and according to one system of time components. The number of used systems determines the number of rows. The total duration of sequential sendings in a row determines its order. The first-order row has a maximum duration and a higher (for equal duration) number of sendings. In the general case, the code combination may be represented, in Cartesian coordinates, by a three-dimensional quantity because it is characterized by its position in time, the number of sendings, and the number of elements in a sending; the corresponding averaged numerical characteristics can be easily computed from the code algorithm and the number of combinations in the code. Sometimes the code combination can be adequately presented in a two-dimensional or single-dimensional space. In this sense, many codes in use are single-dimensional. Bibliography: 5 titles.

SUB CODE: DP   ENCL: 00

Card 2/2

L 40315-65   EWT(d)   Pac-4/Pae-2/Pj-4
ACCESSION NR: AR4041562   S/0271/64/000/006/A054/A054

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.
Svodnyy tom, Abs. 6A306

AUTHOR: Katkov, F. A.; Stulov, V. A.

TITLE: Group of alternating-packet codes for telemechanical systems

CITED SOURCE: Sb. Tekhn. kibernetika. Kiyev, Gostekhizdat USSR, 1963, 124-128

TOPIC TAGS: telemechanical code, supervisory control code

TRANSLATION: The efficiency of using alternating packet codes (APC) for transmitt-
ing information in telemechanical systems is discussed; the code consists of
... frequency packets transmitted in seccession, without dividing time intervals.
... and alternating-quality ... APC, ... packets differ
... the frequency and are combined according to a permutation or a combina-

while in the second case $M = C^n_{C^n_k}$ where m and k are the number of frequencies in

Card   1/3

L 40315-65

ACCESSION NR: AR4044802

the packet and code, respectively; n is the number of packets in the code combination (CC). In the incomplete APC where the adjacent packets have no identical frequencies, the number of CC in permutations and combinations will be:

$$W = P_n^m C_{k-m} \quad \text{and} \quad W = C_m^n C_{k-m}$$

respectively, where P is the number of permutations of the constituent elements in the second and subsequent packets. In the alternating quality code where the packets comprise the same frequencies,

The number of CC in the complete APCs having a group selection can be estimated from this formula. $M = M_1, M_2, \ldots, M_i$ where $M_1, M_2, \ldots, M_i$ is the number of combinations in the first, second, and i-th groups. Modifications of APC with group selection are analyzed, and formulae for estimating the number of CC are given. Thus, for example, the number of CC in an APC with group selection, when any group is composed only of those possible packets which are not used in other groups, is equal

$$M = \frac{C_k^m}{i}$$

, under the condition that C_k^m is exactly divisible by i.

The number of CC, when the groups can be selected by the frequencies sent simultaneously, is equal to

$$M = \left(\frac{k}{i}\right)^i$$

, under the condition that k can be exactly

Card 2/3

L 20017-65   EWT(d)/EED-2/FS(b)   Pac-4/Pae-2/Pj-4   AFETR/ESD(dp)
ACCESSION NR: AR4044901   S/0271/64/000/006/A053/A054

SOURCE: Ref. zh. Avtomatika, telemekhanika i vy*chislitel'naya tekhnika. Svodny*y tom, Abs. 6A305

AUTHOR: Stulov, V. A.

TITLE: Some alternating quality codes used in telemechanical systems

CITED SOURCE: Sb. Tekhn. kibernetika. Kiyev, Gostekhizda USSR, 1963, 128-133

TOPIC TAGS: telemechanics, code

TRANSLATION: Alternating quality codes (AQC) can be used in telemechanical systems as error-detection codes, the frequency being used as quality. A simple AQC can detect, in a code combination, the presence of an adjacent frequency instead of the correct frequency. An arrangement-type AQC permits detecting the wrong frequency from the same code combination. A permutative AQC permits detecting, in a code combination, any wrong frequency which corresponds to a double detection. Relative efficiencies of the above codes are estimated, the efficiency being a ratio of the number of code combinations in a given code to their number in a base code

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L 20017-65
ACCESSION NR: AR4044801

that has the same number of frequencies, packets, and frequencies per packet in
the code combination. Effect of the number of frequencies and packets upon the

SUB CODE: EC   ENCL: 00

Card 2/2

L 3278-66   ENT(d)/FSS-2

ACCESSION NR: AR5014345   UR/0271/65/000/005/A016/A016
                                       621.398.001:621.391.13

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.
Svodnyy tom, Abs. 5A111

AUTHOR: Stulov, V. A.

TITLE: Principles of selection

CITED SOURCE: Sb. Ustroystva i elementy prom. telemekhan. Kiyev, 1964, 5-11

TOPIC TAGS: signal transmission

TRANSLATION: It is suggested that all principles of selection (PS) be reduced to
these four categories: quality, division, distribution, and combination. With the
quality principle, the signal division depends on various values of the parameters
of the information carrier. The signal consists of a single-element packet and
differs from other signals qualitatively or quantitatively. Simultaneous trans-
mission of several values of the same signal indicant is excluded. The signal
indicant means a qualitative indicant of the information carrier and also presence

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L 6434-66   EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)
ACC NR: AR5014352   SOURCE CODE: UR/0271/65/000/005/A043/A043

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.
Svodnyy tom, Abs. 5A303

AUTHOR: Skirta, B. K.; Stulov, V. A.

TITLE: Frequency selectors used in remote-control systems

CITED SOURCE: Sb. Ustroystva i elementy prom. telemekhan. Kiyev, 1964, 63-68

TOPIC TAGS: frequency selector, telemetering, remote control system

TRANSLATION: Selectors are described which consist of parallel or series resonance
circuits, electromechanical 1- and 2-reed vibrators, synchronous filter generators,
and LC differential filters whose operation depends on parametric resonance. One-
and 2-reed vibrators have passbands of 1 and 3%. A reed vibrator combined with a
transistor is used as a generator. The synchronous filter generators and differen-
tial filters are the most economical devices among all selectors used in remote-
control systems. The first operates on the principle of synchronous reception.
They include a semiconductor LC-oscillator, a comparison circuit, and a Schmidt
trigger. The on-off operating transistor acts as a controlled conductance. The

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                                                      0901 1770

L 6434-66
ACC NR: AR5014352

synchronous filter generator is used as a filter or as a generator. The filter
generator produces a signal when the frequency of an arrived wave coincides with
or is very close to the frequency of the local oscillator. Bib. 6, figs. 7.

SUB CODE: DP

nw
Card 2/2

L 3334-66   EWT(1)/EWA(h)

ACCESSION NR: AR5014344

UR/0271/65/000/005/A015/A016
621.398.3:621.391.15

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika. Svodnyy tom, Abs. 5A109

AUTHOR: Stulov, V. A.

TITLE: Noise-duration and noise-amplitude analyzer

CITED SOURCE: Sb. Ustroystva i elementy prom. telemekhan. Kiyev, 1964, 114-116

TOPIC TAGS: noise analyzer, noise analysis

TRANSLATION: The noise immunity of a code can hardly be evaluated without knowing the duration and amplitude distribution of noise. A noise analyzer consisting of threshold devices, exponential selectors (ES), coincidence circuits, inverters, and counters is proposed for determining noise having various amplitudes and durations. For simplicity's sake, an analyzer with two amplitude levels and three duration levels is described. The noise signals pass the

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L 3334-66

ACCESSION NR: AR5014344

threshold device where they are segregated according to their levels, then an ES where they are subdivided according to their durations, then they are applied to the coincidence circuit, and after that — via suitable inverters — they go to the counters which count the noise signals of specified levels and durations. The threshold devices consisting of semiconductor inverters have, at their entrance, diodes with different thresholds. Unlike conventional circuits, inverters are connected to the ES outputs. Only those pulses pass ES whose duration (at the pass level of the final threshold device) exceeds the delay time set for the corresponding ES. By selecting a definite number of threshold devices and ES's, the required noise analyzer can be constructed. Fig. 1.

SUB CODE: EC   ENCL: 00

Card 2/2

L 34875-66

ACC NR: AR6014184   SOURCE CODE: UR/0271/65/000/011/A022/A022

3 6
8

AUTHOR: Stulov, V. A.

TITLE: Formation of channel components with   alternating-packet codes

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 11A151

REF SOURCE: Vestr. Kiyevsk. politekhn. in-ta. Ser. avtomatiki, elektropriborostr. i radioelektron.,no. 1, 1964, 42-44

TOPIC TAGS: telemetry, telemetry system

ABSTRACT: Sequential components in the alternating-packet codes are time formed, usually, by alternating the frequency packets or by changing the code elements that have various values of the same or different parameter of the elementary signal. The sequential components of a channel can be formed, too, by changing the elementary sinusoidal signals differing in their amplitudes or phases. The sequential components of a channel can be time formed by changing the values of one or several signal characteristics. Five figures. Bibliography of 1 title. V. M. [Translation of abstract]

SUB CODE: 09

Card 1/1   UDC: 621.398.3:621.391.15

ACC NR: AT6022308   SOURCE CODE: UR/0000/66/000/000/0053/0056

AUTHOR: Stulov, V. A.

ORG: none

TITLE: Combinatorial properties of codes in remote control

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966.
Sektsiya telemekhaniki. Doklady. Moscow, 1966, 53-56

TOPIC TAGS: coding, coding evaluation, combinatorial analysis, signal coding,
remote control

ABSTRACT: In the limiting case a code combination may consist of a single unit. The
minimum number of code elements in the latter is one. If the code consists of such
combinations only, then its capacity is equal to the number of different code elements.
Each code element possesses d attributes which may assume g values. In the case con-
sidered, code combinations are obtained by combining the values of attributes. Con-
sequently, in the limiting case, the values of attributes and not the code elements are
taken into a code combination. The number of values of the attributes serves as the
code base, because various code combinations are obtained when they are combined. A
code combination may consist of a single multi-element unit. In this case several code
elements are transmitted simultaneously. Alphabets for all parallel components can be
both identical and different. In the case considered, the code has a common alphabet

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ACC NR: AT6022308

only when the alphabets of all its parallel components possess identical elements, gen-
erally, a code combination consists of several units. Then various code combinations
are obtained by combining units in them. In codes which are at present most widely
known, basically those code combinations consisting of single-element units or a single
unit are used. In such a code the number of code elements serves as the base. Orig.
art. has: 8 formulas.

SUB CODE: 09/ SUBM DATE: 24Mar66/ ORIG REF: 002

Card   2/2

/1.5200

28963
S/179/61/000/003/001/016
E031/E435

AUTHOR: Stulov, V.P. (Moscow)

TITLE: The boundary layer on a flat plate taking account of imbalance due to rate of dissociation

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye, 1961, No.3, pp.5-12

TEXT: The equations for a laminar boundary layer on a flat plate in the case of a reacting binary mixture are successively transformed by the introduction of Dorodnitz and Blasius variables and then non-dimensional variables.   The velocity constant of recombination is assumed constant.   Two types of boundary conditions are considered, the first corresponding to the walls being chemically and thermally isolated and the second to the case where the catalytic wall has a given constant temperature and the concentration of atoms on the wall is also constant.   Both problems lead to a complicated system of non linear partial differential equations which can be simplified by assuming that everywhere in the flow the characteristic time of the chemical reaction is small by comparison with the characteristic time of the flow and that the temperature gradients are not greater than of

Card 1/3

The boundary layer on a flat ...

28963
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E032/E435

order unity. Approximate solutions can then be derived by
considering small perturbations. Considering the first problem,
it is found that the velocity profile is given by the well-known
Blasius function and the concentration is determined by the
enthalpy profile (in the zero-order approximation). In the
first order approximation the imbalance has no effect on the
enthalpy distribution. The distribution curve for the deviation
of the concentration from its equilibrium value is a hyperbola for
constant temp. The temperature of the wall at the nose corresponds
to the temperature of the gas particles of the incident flow slowed
without change of concentration. The temperature falls downstream
of the nose to a value corresponding to that of the slowed
particles with equilibrium concentration. The temperature of a
gas particle is greater than the value corresponding to equilibrium
dissociation because in the slowing down of the dissociation
a smaller part of the translation energy of the molecule is
converted in the heat of reaction. The second problem is dealt
with very briefly. In the first approximation the perturbation in
the concentration has no effect on the heat flow. There are
Card 2/3

10.3000

26.5000

S/179/61/000/006/002/011
E032/E514

AUTHOR: Stulov, V.P. (Moscow)

TITLE: Heat transfer in the laminar boundary layer on a plate
with allowance for the absence of chemical equilibrium

PERIODICAL. Akademiya nauk SSSR, Izvestiya Otdeleniye
tekhnicheskikh nauk Mekhanika i mashinostroyeniye,
no. 6, 1961, 11-14

TEXT: This paper is a continuation of previous work reported
by the author in Ref.1 (Izv AN SSSR OTN Mekhanika i mashino-
stroyeniye, 1961, No.3) The heat transfer to the wall in the
boundary layer of a reacting atomic-molecular mixture depends on
the change in the viscosity-density product, the Prandtl number
and the Lewis number across the boundary layer. The author
derives approximate formulae which may be used to calculate the
effect of changes in the physical parameters on the heat flow, on
the assumption that the changes are small in the boundary layer.
The calculation takes into account binary diffusion and is applied
to the special case of oxygen and nitrogen. It is shown that the
calculations are in good agreement with experimental results over

Card 1/2

S/179/62/000/003/001/015
E031/E335

24.4300

AUTHOR: Stulov, V.P. (Moscow)

TITLE: The flow round a convex angle of an ideal dissociationg
            gas taking account of disequilibrium

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
              tekhnicheskikh nauk. Mekhanika i mashinostroyeniye,
              no. 3, 1962, 4 - 10

TEXT: The flow round an angle nearly equal to $180°$ of an ideal
dissociating gas was studied by Clarke (J. Fluid Mech., 1960,
v.7, p. 4). In this paper an approximate solution is given for the
problem for an arbitrary angle and the change in the discontinuity
of the normal derivatives of the gas-dynamic variables along the
characteristic separating the uniform incident flow from the
expansion fan is studied. Disequilibrium occurs because of the
finite velocity with which energy is transmitted by the inert
degrees of freedom of atoms and molecules. The characteristic
time of flow can become equal to the characteristic time to
establish equilibrium. The system of equations of motion of an
inviscid gas must be supplemented by the equations describing the
Card 1/2

SOURCE: AN SSSR. Izvestiya.

supersonic flow, nonequilibrium flow, air flow, shock ... ... distance ... ... n concentration;

... chemical reaction ... of the gas-dy-
namic parameters are analyzed. A comparison of the velocities of
three reactions: ... shows that the first reaction is predominant at less than Mach 25,
though the velocity of the second reaction increases faster when the

Card 2/3

ASSOCIATION: none

SUBMITTED   23 Jun64   ENCL: 00   SUB CODE: ME

NO REF SOV: 005   OTHER: 002   ATD PRESS: 3228

Card 3/3

L 08066-67   EWT(d)/EWT(1)/EWP(m)/EWT(m)/EWP(w)/EWP(k)   IJP(c)   WW/EM
                                    SOURCE CODE: UR/0421/66/000/005/0003/0007
ACC NR: AP6034531   7/

AUTHOR: Stulov, V. P. (Moscow); Turchak, L. I. (Moscow)

ORG: Institute of Mechanics, Moscow State University (Institut mekhaniki MGU)

TITLE: Supersonic air flow past a sphere with vibrational relaxation taken into account

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 5, 1966, 3-7

TOPIC TAGS: supersonic aerodynamics, supersonic flow, shock wave, vibration relaxation, relaxation process, stagnation point, degree of freedom

ABSTRACT: A numerical solution of the problem of supersonic air flow over a sphere when there is nonequilibrium excitation of vibrational degrees of freedom of the molecular components is obtained by the method used in a previous work (Izvestiya AN SSSR, Mekhanika, no. 1, 1965). The laws of conservation of mass, energy, and momentum on the shock wave and the condition of impermeability of the sphere surface are taken as boundary conditions. Calculations were carried out for flows over a sphere of 0.75 cm radius in the Mach range from $M_\infty = 4$ to

Card 1/2

STULOVA, A. F.

Geese - Gor'kiy Province

Hatching goose eggs at the Pavlovo Incubator Station, Ptitsevodstvo No. 2, 1953.

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

STULOVA, Anna Fedorovna; SHUTOV, Nikolay Ivanovich

[Leading poultry farmers] Peredovye ptitsevody. [Gor'kii]
Gor'kovskoe kn-vo, 1954. 36 p.   (MIRA 9:10)
        (Poultry)

STULOVA, I.L.,referent.

Crushing operations at the Outokumpu Plant (from a report at
the World Congress on Mineral Dressing held in Stockholm).
Obog.rud 3 no.4:38-42 '58.   (MIRA 12:2)
(Outokumpu--Ore dressing) (Stockholm--Ore dressing--Congresses)

MAKOVSKIY, N.D.; STULOVA, I.L.

New trends in the field of crushing and grinding. TSvet. met. 33
no.10:92-94 O '60.   (MIRA 13:10)
          (United States--Ore dressing)

NOVIKOV, A.V.; GANINA, A.Z.; ONEGINA, A.K.; TULOVA, M.V.; AZAROVA, L.A.;
DAN'KOVA, M.N.; OPOLCHENTSEVA, T.D.; SHIBAYEV, D.P.; ZHABYKO, Ye.G.;
MINKINA, A.G.; OVSYANKINA, Ye.I.; SAVENKOV, F.S., red.; SLEMZIN,
A.A., red.; FOMICHEV, P.M., tekhn.red.

[Economy of Kaluga Province; collected statistics] Narodnoe khoziai-
stvo Kaluzhskoi oblasti; statisticheskii sbornik. Moskva, Gos.stat.
izd-vo, 1957. 142 p.   (MIRA 11:6)

1. Kaluzhskaya oblast', Statisticheskoye upravlenie. 2. Statisti-
cheskoye upravleniye Kaluzhskoy oblasti.(for all except Savenkov,
Slemzin, Fomichev) 2. Nachal'nik Statisticheskogo upravleniya
Kaluzhskoy oblasti (for Savenkov)
            (Kaluga Province--Economic conditions--Statistics)

STULOVA, M.V., inzh., otv. za vypusk; VOROTNIKOVA, L.F., tekhn. red.

[Factory regulations for repairing multiple-units of d.c.
trains; change in the regulations of 1955 for the general
overhaul and minor repair of multiple-unit cars] Pravila
zavodskogo remonta sektsii elektropoezdov postoiannogo toka;
vzamen Pravil kapital'nogo i srednego remontov elektrostan-
tsii izd. 1955 g. Moskva, Transzheldorizdat, 1963. 390 p.
(MIRA 16:5)

1. Russia (1923- U.S.S.R.)Glavnoye upravleniye lokomotivnogo
khozyaystva.
(Electric railroads---Maintenance and repair)

STULOVA, M.V., inzh., otv.za vypusk; MEDVEDEVA, M.A., tekhn. red.

[Regulations governing the repair of multiple-unit rail cars
of d.c. trains in railroad repair shops; superceding the
regulations for the maintenance and repair of multiple-unit
rail cars approved by the Ministry of Railroads on May 21,
1955] Pravila depovskogo remonta sektsii elektropoezdov po-
stoiannogo toka; vzamen Pravil tekushchego remonta, ukhoda i
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go khozyaystva.
    (Electric railway motors—Maintenance and repair)
      (Electric railroads—Maintenance and repair)

GURKO, Z.V.; STULOVA, O.V.; BARYKINA, O.A., otv.red.; LUCHKINA, A.N., red.
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[Development of Soviet science during 40 years; a bibliography of
anniversary literature published in 1957 and 1958] Razvitie so-
vetskoi nauki za 40 let; ukazatel' iubileinoi literatury 1957-1958
gg. Sost.Z.V.Gurko i O.V.Stulova. Moskva, 1960. 87 p.

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        rubber mixtures for prevulcanization. Trudy Nauch.-issl. inst.
        shin. prom. no.7:154-167 '60.   (MIRA 14:8)
                (Vulcanization) (Rubber, Synthetic--Testing)

LUKOMSKAYA, A.I.; ORLOVSKIY, P.N.; MEREZHANNYY, S.B.; STUKALOVA, A.F.;
    Prinimali uchastiye: SAMOKHODKINA, K.G.; KALINOVA, L.T.;
    GORINA, A.K.; STULOVA, V.T.

    Effect of the surface-to-volume ratio of a test piece in the
    evaluation of the processing qualities of rubber blends. Kauch.
    i rez. 20 no. 4:36-42 Ap '61.   (MIRA 14:5)

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    Lukomskaya, Orlovskiy, Merezhannyy, Stukalova).
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STULOVA, Ye.A.

Clinical aspects of acute industrial intoxication with dibromoethane.
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    A new procedure for the treament of total rectal prolapse.
Rumanian M. Rev. 3 no.4:62-64 O-D '59.
      (RECTUM,surgery)

L 35031-65   EWT(m)/EWP(b)/EWP(t)   JD   S/0286/65/000/005/0024/0034

ACCESSION NR: AP5008155

AUTHOR: Paton, B. Ye.; Dudko, D. A.; Medovar, B. I.; Latash, Yu. V.; Maksimovich,
B. I.; Shevchenko, A. I.; Stupak, L. M.; Goncharenko, V. P.; Grigor'yev, L. F.;
Petukhov, G. K.; Chudin, N. I.; Lubenets, I. A.; Yartsev, M. A.; Keys, N. V.;
Tulin, N. A.; Kapel'nitskiy, V. G.; Privalov, N. T.; Pis'mennov, V. S.; Kholodov,
Yu. A.; Bystrov, S. M.; Bastrakov, N. F.; Donets, I. D.; Bilayev, A. Ya.

TITLE: Method of electroslag casting of ingots. Class 18, No. 168743

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 34

TOPIC TAGS: ingot casting, ingot electroslag casting, electroslag melting, steel
melting, alloy melting, metal melting

ABSTRACT: This Author Certificate introduces a method of electroslag casting of
ingots in an open or protective atmosphere or in vacuum, in which slag is first
melted in a mold with a nonconsumable or consumable electrode arc or plasma jet.
To improve the metal quality and the ingot surface and to raise the yield, the
molten metal or, if needed, the slag is poured into the mold through a hollow con-
sumable or nonconsumable electrode (see Fig. 1 of the Enclosure). Orig. art. has:
1 figure.   [ND]

Card 1/3

L 35031-65

ACCESSION NR: AP5008155   /

ASSOCIATION: Chelyabinskiy metallurgicheskiy zavod (Chelyabinsk Metallurgical Plant)

SUBMITTED: 06Feb63   ENCL: 01   SUB CODE: MM, IE

NO REF SOV: 000   OTHER: 000   ATD PRESS: 3215

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