

SEMIKHATOVA S. V.,

IA 172T29

USSR/Geology - Carboniferous

11 Oct 50

"Lower and Middle Carboniferous in the Gor'kiy Region," S. V. Semikhatova, All-Union Sci-Res Inst of Natural Gases

"Dok Ak Nauk SSSR" Vol LXXIV, No 5, pp 1003-1007

New data processed in the Institute is used to throw light upon geological history of region. Data on Carboniferous rocks given by A. N. Petrovskaya; foraminifera detd by G. D. Kireyeva; corals by T. A. Dobrolyubova; and Brachipoda by author. Submitted by Acad D. V. Nalivkin 14 Aug 50.

~~172T29~~
172T29

1. SEMIKHATOVA, S.V.K.
2. USSR (600)
4. Geography & Geology
7. Stratigraphy and ^{geological}geographical history of the Devonian and Carboniferous on the Russian Platform. Moskva, Gostoptekhizdat, 1951

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

1. SEMIKHATOVA, S.V.
2. USSR (600)
4. Moscow Basin - Geology, Stratigraphic
7. Boundary between the Bashkir and Moscow formations of middle Carbon. Dokl. AN SSSR. 86, no. 6, 1952.

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

SEMIKHATOVA, S.V., redaktor.

[Petroleum and natural gas geology and geochemistry (European part of U.S.S.R.)] Voprosy geologii i geokhimii nefiti i gaza (Evropeiskaia chast' SSSR) Moskva, Gostoptekhnizdat, 1953. 382 p. (MIRA 7:11D)

SEMIKHATOVA, S.V.

History of the middle Carboniferous period in the Russian Platform. *Biul.*
(MIRA 6:9)
MOIP. Otd.geol. 28 no.4:33-52 '53.
(Russian Platform--Geology, Stratigraphic) (Geology, Stratigraphic--
Russian Platform)

1. MENYAYLENKO, P.A., SEMIKHATOVA, S. V.
2. USSR (600)
4. Don-Medveditsa Uplifts - Geology, stratigraphic
7. Deposits of the B^{sh}kirian stratum of the Middle-Carboniferous period in the southern part of the Don-Medveditsa uplifts. Dokl. AN SSSR 88 no. 3: 1953

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

SEMIKHATOVA, S.V.; NAZAROVA, V.A.; ROSTOV'TSEVA, L.F.; NALIVKIN, D.V., akademik.

The Turneisk and lower part of Vizeisk strata of the Orel river region in the Dnieper-Donets depression. Dokl.AN SSSR 92 no.1:147-150 S '53. (MLRA 6:8)

1. Akademiya nauk SSSR (for Nalivkin). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnykh gazov (for Semikhatova, Nazarova and Rostov'tseva). (Orel valley--Geology, Stratigraphic) (Geology, Stratigraphic--Orel valley)

~~SEMIKHATOVA, S.V.~~

Tournaisian deposits in the lower Volga Valley, Donets Basin, and
southeastern Dnieper-Donets Lowland. Trudy VNIIGI no.6:12-35 '55.
(MLRA 9:11)

(Volga Valley--Geology, Stratigraphic)
(Donets Basin--Geology, Stratigraphic)
(Dnieper Lowland--Geology, Stratigraphic)

SEMIKHATOVA, S.V.

Hamur stage and its significance to the Carboniferous stratigraphy
in the U.S.S.R. *Biul.MOIP.Otd.geol.* 30 no.5:75-104 S-0 '55.
(Geology, Stratigraphic) (MLRA 9:1)

SEMIKHATOVA, S. V.

USSR/Geology - Paleontology

Card 1/1 Pub. 22 - 40/53

Authors : Semikhatova, S. V., and Menyaylonko, P. A.

Title : ~~Geological and paleontological characteristics of deposits bordering between Devonian and Carbonaceous in the southern part of the Don-Medveditse upheavals~~

Periodical : Dok. AN SSSR 102/4, 805-808, Jun 1, 1955

Abstract : Geological data are presented regarding the lithological and paleontological characteristics of Devonian-Carbonaceous deposits discovered in the southern part of the Don-Medveditse upheaval. Two USSR references (1951 and 1954). Table.

Institution :

Presented by : Academician N. M. Strakhov, December 14, 1954

15-57-5-5854

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5,
p 20 (USSR)

AUTHOR: Semikhatova, S. V.

TITLE: Choristites of the Group Choristites mosquensis Fischer
From the Middle Carboniferous of the Don-Medveditsa
Uplifts and Their Stratigraphic Significance (Khoristity
gruppy Choristites mosquensis Fischer v srednem karbone
Dono-Medveditskikh podnyatiy i ikh stratigraficheskoye
znacheniiye)

PERIODICAL: Tr. Vses. n.-i. geol.-razved. neft. in-ta, 1956, Nr 7,
pp 73-116.

ABSTRACT: The author describes and illustrates eight species of
brachiopods (four of these are identified approximately)
from the upper part of the Moscovian series (Podol'skiy
and Myachkovo horizons) from the Archedin'sko-Don'skoy region
and the village of Zhirnoye on the Medveditsa River. More
Card 1/3 details are furnished for Choristites mosquensis, the

15-57-5-5854

Choristites of the Group Choristites mosquensis (Cont.)

varieties of which have 1) a sinus that broadens in the anterior part of the ventral valve, 2) a strongly beaked ventral valve, and 3) rather thin ridges. The specific content and course of development of Choristites mosquensis in this region are the same as in the central part of the Russian platform. The group thrived in Podol'skoye time and died out at the end of the Myachkovo interval. But at the time that this group was the principal form in the Moscow basin, other varieties were also present, whereas in the Archedinsko-Donskoy region the group was not only dominant, other forms (Choristites priscus and C. trautscholdi) were extremely rare. The general character of the sediments, their thickness, and also the fossil content show that the Carboniferous deposits of this region are of the platform type and should not be considered transitional to the Donets type. However, the path of migration for the fauna through the Middle Carboniferous connection between the Donets sea and the seas of the central and eastern regions of the Russian platform passed through the southern part of the Don-Medveditsa uplift zone. There is reason to believe that at the end of Moscovian time there was a small general uplift of the Voronezh massif, but this view needs support
Card 2/3

Choristites of the Group Choristites mosquensis (Cont.) 15-57-5-5854

by further comparative lithologic and paleontologic studies in the Carboniferous of the region of the Moscow basin and the Don-Medveditsa uplifts. The paper has seven tables and a bibliography with 53 references.

Card 3/3

T. G. S.

SEMIKHATOVA, S.V.; CHIZHOVA, V.A.

Stratigraphic correlation of the Tournaisian and the lower Viséan stages in the Mikhaylovskoye uplift (southeastern section of the Dnieper-Donets Lowland). Trudy VNII no.9:53-62 '56. (MIRA 10:1)
(Dnieper Lowland--Geology, Stratigraphic)
(Donets Basin--Geology, Stratigraphic)

PISTRAK, R.M.; SEMIKHATOVA, S.V.; PASHKEVICH, Ye.I.; VEREYSKAYA, K.N.

Stratigraphy and lithology of the lower Carboniferous of White
Russia. Izv.AN SSSR.Ser.geol. 21 no.4:59-76 Ap '56. (MLRA 9:8)

1. Soyuznaya geologo-poiskovaya kontora Ministerstva neftyanoy pro-
myshlennosti SSSR, Moskva.
(White Russia--Geology, Stratigraphic)

SEMIKHATOVA, S.V.

Stratigraphy and geological history of lower Carboniferous Kizel
horizon deposits. Biul. MOIP.Otd.geol. 31 no.15:126-127 S-0 '56.

(Geology, Stratigraphic)

(MLRA 10:3)

СЕМИХАТОВА, С.

SEMIKHATOVA, S.; SAZONOV, N.

Conference of the All-Union Petroleum Scientific-Research Institute
for Geological Survey on the stratigraphy of the lower part of the
lower Carboniferous. Geol.nefti 1 no.10:69-71 0 '57. (MIRA 10:10)
(Geology, Stratigraphic)

SEMINOVA, S.V.

Stratigraphic importance of the Namurian stage. Trudy VNIIGI
no.8:92-137 '57. (MIRA 12:2)
(Geology, Stratigraphic)

Семикхатова, С. В.

AUTHOR: Semikhatova, S.V.

5-6-20/42

TITLE: Some Problems in the Stratigraphy of the Lower Part of the Lower-Carboniferous System (Nekotoryye voprosy stratigrafii nizhney chasti nizhnego karbona)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody. Otdel Geologicheskiiy, 1957, # 6, pp 133-135 (USSR)

ABSTRACT: In April 1957, the All-Union Scientific Research Geological-Survey Petroleum Institute (VNIGNI) called a meeting dedicated to the stratigraphic problems of the lower part of the Lower-Carboniferous system.

The author cites the stratigraphic scheme accepted by the meeting and proposes some correlations between the subdivision of the European USSR of this scheme with the corresponding formations in Western Europe, basing his suggestions on the comparison of paleontological data. X

AVAILABLE: Library of Congress

Card 1/1

The Upper-Kizelov Strata Near Buzuluk, -Chkalov Province. 20-4.47/61
less silicified, little loam material. Similar limestones, predominantly organogen-detritus containing, with 45-60% organic relics. Among them foraminiferae, ostracodae, Crinoideae and ostracode splinters as well as pieces of tubular algae. In the upper part secondary dolomites occur with numerous single corals and bits of Crinoideae; 3rd packet, 21 m thick, consists of grey limestone of all shades, mostly recrystallized; numerous parts of fine-grained carbonate (?algae) and lenses of black flint. In the limestone a rather abundant fauna, however with few species, as above, is represented. Among the foraminiferae those with few windings as well such with a high number of windings are predominant. 4th packet, 24.74 m thick, consists of limestone, at the bottom with few intermediate layers of secondary dolomites, and thin layers of dark-grey siderites and black flint. Lime is grey, predominantly containing organogen-detritus, consisting of algae-Crinoideae, unevenly dolomitized in layers silicified. Dolomite is light- and dark-grey to almost black, highly recrystallized, calcareous at the bottom, pyritized, solid, on the top with rare incorporations of bluish-grey anhydride. The organic relics, here only appear, sporadically give evidence of the secondary nature of the dolomite. Fauna of foraminiferae has become very poor with the same arrangement of groups as in the two following packets. Corals indeterminate owing to bad conservation. In the overlying layer of this packet the modification of the combination of the foraminiferae and brachypoda. Ostracodes are present in several intervals. 5th packet, 24 m thick; separates according to the relief of

Card 2/4

AUTHOR
TITLE

SEMIKHATOVA S.V., RYZHOVA A.A., ROSTOVTSOVA L.F. 20-4-47/61
The Upper-Kizelov Strata Near BUZULUK, -Chkalov Province.
(Verkhneki zelofskiye s loi bliz Buzuluka Chkalovskoy oblasti -
- Russian)
Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 4, pp 889-892 (U.S.S.R.)

PERIODICAL
ABSTRACT

These strata were here disclosed for the first time. They form an almost 200 m thick mass which consists mainly of gritstones and in the upper 48 m of terrigene rocks. Sea fauna is abundantly represented. The region is situated at the northern borde of the Caspian depression. As lower limit of the mentioned strata the authresses take the bottom of the Rakov-mass of V.M.Pozner. The Upper Kizelov-strata are deposited near Buzuluk in a depth of 2870 m. The upper boundary is taken in a depth of 2686 m, at a depth where the Kizelov-fauna is relieved by spores of the carboniferous horizon. Its thickness is 184 m. In both boundaries there is a stratigraphical incoincidence. At the Buzuluk cross-section these strata are separated into 6 pakets. 1st packet, 28 m thick, with high silification, terrigene sediments present, fauna poor. Rock is represented by dark-gray limestones, partially recrystallized, loamy-dolomitic at the bottom, siliceous-loamy higher up, in layers pyritized. Lenticularly black flint occurs. In the lower part-badly preserved brachypoda, sometimes silicified Crinoidea segments. Everywhere gravel spicules from fungi, rare ostracodae and, Archispaeren. 2nd packet, 38 m thick, is

Card 1/4

The Upper-Kizelov Strata Near Buzuluk, Chkalov province. 20-4.47/61
its fauna. Lithologically not very different to the 4th packet. Limestone highly recrystallized. Fine- and small-grained calcite and less lump-shaped micro-grained carbonate serve as cement. Among the brachypoda the *Chonetes dalmanianus*, which is characteristic for the 3rd and 4th packet, here only appears sporadically. The most numerous are *Megachonetes zimmermanni* and *Pustula cf. pixidiformis*. At the bottom Spirifer-species and in an intermediate layer *Cacrinella aff.* and *ata* as well as frequent orthothetines-relics were found. In different depths corals (5 species) and ostracodes (5 species) are numerous. The 6th (terrigene) packet, 47.84 m thick, is composed of alternating marls, argillites, dolomites, and lime-loams, loamy limestones as well as dolomites and in the top contains intermediate layers of flints and siderites. In the cross-section argillites are predominant. In some argillites intermediate layers there are relics of corals, brachypodouzes, pelecypodae and Crinoidae in high number. Moreover single ostracodes, fish relics, spores and pieces of vegetable tissues. In limestones there is a similar fauna, moreover pyritized plant relics, pieces of moss animals, trilobates, tubular algae and single badly preserved foraminifera capsules. According to the foraminifera and brachypoda the packets I.-V. could be compared with the mass of Rakow and possibly with the lower Malinov-masses of V.M. Pozner. L.F. Rostovtseva compares according to the foraminiferae the packets II.-IV. with the IV.-V.-masses of the Pilyugin cross-section and the packets III. and IV. with the Gubakha-

Card 3/4

The Upper-Kizelov Strata near Buzuluku, Chkalov province. 20-4-47/51
packet. The brachypoda-complex of the VI. packet has no analogy in the
kizelov faunae so far known. According to the foraminiferae the packet
VI. ought to be classified to the kizelov horizon. V.A. Chizhova classifies
the packets III.-VI. according to the ostracodes into the upper
part of the Kizelov horizon. The brachypoda found in the Buzuluk cross-
section: *Chonetes dalmanianus*, *Pustula cf. pixidiformis*, *Spirifer konin-*
cki, *Sp. Aff. attenuatus* offer the possibility to classify the here des-
cribed sediments into the *productus sublaevis*-zone. At the same time
the entire above mentioned fauna of brachypoda confirms the necessity
of classifying this zone among the *Wiesa* and not among the *Turna* as
in the *Donez*-basin on the east slope of the Ural and in Western
Europe.
(3 citations from Slavic publications).

ASSOCIATION Allunion-Scientific Research Institute for Geological Mineral-Oil
Explorations.
PRESENTED BY Strakhov N.M., Member of the Academy
SUBMITTED 22.10.1956
AVAILABLE Library of Congress
Card 4/4

SEMIKHATOVA, S.V.

AUTHOR

SEMUKHATOVA S.V., YELINA L.M., DALMATSKAYA I.I.

20-5-48/67

TITLE

The Moscow stage of Middle Carboniferous in the Melekess Depression.
(Moskovskiy yaruz Srednego karbona v Melekesskoy vpadine -Russian)

PERIODICAL

Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 5, pp 1119-1122 (U.S.S.R.)
Received 7/1957

Received 8/1957

ABSTRACT

The deposits of the Moscow stage near the city of Melekess (in the territory of Kuybyshev-Samara) were laid open in a depth of 1167-785 m. The deposits of the Verey horizon (44 m) are concordantly stratified on the rocks of the upper part of the Bashkir stage. This horizon is subdivided into 3 lithological stratified packets. The lowest (8 m) consists of limestone with a sparse admixture of clay and intermediate strata of aleurites and dolomites. In limestone there is a lot of organogenic detritus of foraminifera, crinoids, brachiopods, and algae. The middle packet (30 m) is a varying stratification of clays, marls, aleurites, limestone, and rare dolomites. Clays are predominant, with 7-27% aleurite admixture, with calcareous intermediate strata which contain fragments of crinoids, brachiopods, as well as remains of plant tissue and lentiform intermediate strata of crushed brachiopod shells. The Kashir horizon consists of 2 stratified packets. The lower one (22 m) consists of limestone with inferior dolomites. The top packet (68 m) consists of limestone with thin clayey intermediate strata, its structure, however, is on the whole similar to that on the lower packet. The Podol horizon is at the top faintly characterized by fauna and its boundary is traced according to electric corotage. Compared to the Kashir horizon the dolomites are here more developed than the limestone. Among limestone, alga-

Card 1/3

The Moscow Stage of Middle Carboniferous in the Melekess 20-5-48/67 Depression.

limestones are characteristic. 3 stratified packets: 42, 49, and 36 m. In the lower organogenic -detrital clayey limestone with thin dolomite-intermediate strata and lentils of green clay dominate. Among the remains of organisms there are up to 20% bryozoa-flakes, elsewhere up to 15% siphonic-algae. In the second packet dolomites with clayey intermediate strata and rare prints of brachiopods predominate, inclusions of gypsum, anhydrite, and flint are found. The top packet is chiefly built of organogenic-detrital limestone with dolomite-intermediate strata in the middle part. The Myachkov horizon consists of limestone with dolomite-and clayey intermediate strata as in the Podol horizon. There are three packets: 6, 5, 25, and 88 m. Also here anhydrite, gypsum, and flint are to be found. The first packet consists of organo-detrital limestone with clayey intermediate strata, frequently such of shell-rock are up to 1, 5-3 cm thick. The second packet consists of dolomites with intermediate strata of organogenic-splintery and sometimes oolitic limestone. Foraminifera and brachiopods were determined. The third packet consists of varying stratifications of limestone, dolomite, and thin clayey strata of similar character as on the top. The total thickness of the deposits of the Moscow stage amounts in Melekess to 383 m and thus surpasses those of the right bank of the Volga to some extent. According to the rock-types of the single horizons and the total composition of the fauna the deposits of this stage in Melekess are equal to the deposits of the same age in the Tataric vault and in the central parts of the Moscow synclisis although local peculiarities are to be noticed.

Card 2/3

EYHOI, Ol'gerd Leonardovich; SEMIKHATOVA, S.V., prof., red.; DAYEV, G.A., vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Studies on the stratigraphy of Carboniferous deposits of the eastern borderland of the Volga-Ural petroleum province (mountain region of Bashkiria)] Issledovaniia po stratigrafii karbona vostochnoi okrainy Uralo-Volzhskoi neftenosnoi oblasti (Gornaia Bashkiriia). Pod red. S.V.Semikhatovoi. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr. otd-nie, 1958. 193 p., maps. (MIRA 12:2)
(Bashkiria--Geology, Stratigraphic)

IL'INA, N.S., kand.geologo-mineralog.nauk; YELINA, L.M.; RYZHOVA, A.A.;
BUZINOVA, V.M.; DMITRIYEVA, L.Ya.; GIMPELEVICH, E.D.; GALAKTIONOVA,
N.M.; IL'INSKAYA, V.V.; SOLOV'YEVA, N.S.; KARASEV, M.S.; BAKIROV, A.A.,
red.; VEBER, V.V., red.; DANOV, A.V., red.; DIKENSHTSEYN, G.Kh., red.;
MAKSIMOV, S.P., red.; POZNYSH, M.A., red.; SAIDOV, M.N., red.;
SEMUKHATOVA, S.V., red.; TURKEL'TAUB, N.M., red.; UL'YANOV, A.V., red.
[deceased]; KHALTURIN, D.S., red.; SHABAYEVA, Ye.V., red.; CHIZHOV,
A.A., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Coal deposits of the central provinces of the Russian Platform]
Kamennougol'nye otlozheniia tsentral'nykh oblastei Russkoi platformy.
Pod red. N.S.Il'inoi. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i
gorno-toplivnoi lit-ry, 1958. 209 p. (MIRA 12:3)
(Russian Platform--Coal geology)

FLEROVA, O.V., kand. geol.-mineral. nauk, red.; BAKIROV, A.A., red.; VEBER,
V.V., red.; DANOV, A.V., red.; DICKENSHTEYN, G.Kh., red.; MAKSIMOV,
S.P., red.; POZNYSH, M.A., red.; SAIDOV, M.H., red.; SEMIKHATOVA,
S.Y., red.; FURKEL'TAUB, N.M., red.; KHALTURIN, D.S., red.;
SHABAYEVA, Ye.A., red.; ZARETSKAYA, A.I., vedushchiy red.; FEDOTOVA,
I.G., tekhn. red.

[Mesozoic and Tertiary deposits of the central provinces of the
Russian Platform] Mezozoiskie i tretichnye otlozhenia tsentral'-
nykh oblastei Russkoi platformy. Pod red. O.V. Flerovoi. Moskva,
Gos. nauchno-tekhn. izd-vo nef. i gorno-toplivnoi lit-ry, 1958.
291 p.
(MIRA 11:10)

1. Moscow. Vsesoiuznyy nauchno-issledovatel'skiy geologo-razvedoch-
nyy nefyanoy institut.
(Russian Platform—Geology, Stratigraphic)

Filippov, M.F.
FILIPPOVA, Mariya Filippovna, kand.geol.-miner.nauk; ARONOVA, S.M.; AFREMOVA,
M.F.; GALAKTIONOVA, N.M.; GASSANOVA, I.G.; GIMPELEVICH, E.D.; KARASEV,
M.S.; LYASHENKO, A.I.; MAYZEL', Z.L.; RATEYEV, M.A.; SOKOLOVA, L.I.;
SOLOV'YEVA, N.S.; KHANIN, A.A.; SHISHENINA, Ye.P.; SHNEYDER, N.P.;
BAKIROV, A.A., red.; VEBER, V.V., red.; DANOV, A.V., red.; DIKEN-
SHTEYN, G.Kh., red.; MAKSIMOV, S.P., red.; POZNYSH, M.A., red.;
SAIDOV, M.N., red.; SEMIKHATOVA, S.V., red.; TURKEL'TAUB, N.M., red.;
UL'YANOV, A.V., red. [deceased]; KHALTURIN, D.S., red.; SHABAYEVA,
Ye.A., red.; RAZINA, G.M., vedushchiy red.; GENNAD'YEVA, I.M., tekhn.
red.

[Devonian deposits in the central provinces of the Russian Platform]
Devonskie otlozhenia tsentral'nykh oblastei Russkoi platformy.
Pod red. M.F.Filippovoi. Leningrad, Gos. nauchno-tekhn.izd-vo neft.
i gorno-toplivnoj lit-ry, 1958. 404 p. (MIRA 11:4)
(Russian Platform--Geology, Stratigraphic)

SEMIKHATOVA, S.V.

Stratigraphy of lower Carboniferous terrigenous formation in
the Volga-Ural area. Geol.nefti 2 no.3:30-35 Mr '58.
(MIRA 12:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy
neftyanoy institut.
(Volga Valley--Geology, Stratigraphic)
(Ural Mountain region--Geology, Stratigraphic)

SEMIKHATOVA, S.V., RYZHOVA, A.A., DALMATSKAYA, I.I.

Middle Carboniferous sediments in Buzuluk District, Orenburg
Province. Geol. nefti Supplement to no. 7:68-74 '58. (MIRA 11:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy
neftyanoy institut.

(Buzuluk District--Geology, Stratigraphic)

SEMIKHATOVA, S.V.; YELINA, L.M.

Carboniferous sediments. Trudy VNIGNI no. 10:41-51 '58.

(Russian Platform--Geology, Stratigraphic) (MIRA 14:5)

SEMIKHATOVA, S.V.

Tournai and earlier Visé time in the Russian Platform. Izv. AN
SSSR. Ser. geol. 23 no.2:12-24 F '58. (MIRA 11:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut, Moskva.
(Russian Platform--Geology)

Semikhatova, S.V.

20-2-59/6c

AUTHORS:

Semikhatova, S. V. , Yelina, L. M. , Dalmat'skaya, I. I.

TITLE:

Deposits of the Bashkirskiy Stage in Melekess (Otlozheniya bashkirskogo yarusa v Melekesse)

PERIODICAL:

Doklady AN SSSR, 1958, Vol. 118, Nr 2, pp. 381 - 383 (USSR)

ABSTRACT:

These sediments are deposited with a stratigraphic discordance on the rocks of the Protvinskiy horizon. The gap in the sedimentation manifests itself here in the development of lime-conglomerates and in a high secondary change of the rocks in the upper part of this horizon. The Bashkirskiy stage is 45 m thick and lithologically subdivided in 2 horizons of local importance. The exact identification of the latter may be carried out because of certain local differences of the foraminifera fauna. The lower horizon (probably analogous to the Molotovskiy horizon) is 26 m thick and consists of light-gray and white limes which are highly recrystallized and highly silicified, and which contain flint-inclusions and clay-admixtures. With regard to fauna crinoid-foraminifera-limes predominate, those containing brachiopods and other fossils of animal groups are more seldom represented. The foraminifera fauna makes assume an analogy with the Molotovskiy horizon, but the Pseudostafella are too scarce for this. On the other hand the occurrence of

Card 1/3

Deposits of the Bashkirskiy Stage in Melekess

20-2-5a/6a

differences of the fauna stand in the complexes render their assimilation difficult. Nevertheless the upper complex may be equated with the upper part of the Podvereyskiy horizon (according to the first occurrence of Aljutovella and Verella). The first occurrence of Schubertella here might be explained by its belated penetration to this part of the water. Thus only the upper half of the sediments of the Bashkirskiy stage is apparently present in the Melekess. There is no gap between the Bashkirskiy- and Vereyskiy sediments, here. The Bashkirskiy sediments at the right bank of the Volga approximately have a similar extension in the Uljanovskiy support bore-hole, but the thickness here decreases toward the west to 25 m and still further. These facts reflect the existence of apparently large elevations during the Carboniferous.

ASSOCIATION: All-Union Scientific Research Institute for Petroleum Geology and Prospecting (Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut)
PRESENTED: March 14, 1957, by S. I. Mironov, Academician
SUBMITTED: March 14, 1957
AVAILABLE: Library of Congress

Card 3/3

SAMIKHATOVA, Sof'ya Viktorovna, prof.; YELINA, Lyubov' Mikhaylovna;
RYZHOVA, Antonina Aleksandrovan; BYVSHEVA, Tamara Vladimirovna;
DALMATSKAYA, Irina Ippolitovna; DOBROKHOTOVA, Sof'ya Vasil'yevna;
MINYAYEVA, Yevgeniya Georgiyevna; ROSTOVTSEVA, Lidiya Fedorovna;
ZARETSKAYA, A.I., ved.red.; POLOSINA, A.S., tekhn.red.

[Studies on Carboniferous sediments of the Volga-Ural oil-bearing province] Materialy k izucheniiu kamennougol'nykh otlozhenii Volgo-Ural'skoi neftenosnoi oblasti. Pod red. S.V.Semikhatovoi. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 206 p. (MIRA 13:3)

(Volga Valley--Geology)
(Ural Mountains--Geology)

SEMIKHATOVA, S.V.

Stratigraphy of the lower part of the lower Carboniferous. Trudy
VNIGNI no.14:5-30 '59. (MIRA 12:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut (VNIGNI).
(Russian Platform--Geology, Stratigraphic)

SEMIKHATOVA, S.; MAKAROVA, T.; IVANOVA, Z.; FILIPPOVA, M.

Precized unified diagrams of the Paleozoic stratigraphy
of the Volga-Ural oil-bearing province, 1960. Geol.nefti
i gaza 4 no.6:52-3 of cover Je '60. (MIRA 13:7)
(Volga Valley--Geology, Stratigraphic)
(Ural Mountain region--Geology, Stratigraphic)

DALMATSKAYA, I.I.; LAFKOVA, V.Ye.; ORLOVA, I.N.; RAUZER-CHERNOUSOVA, D.M.;
REYTLINGER, Ye.A.; SAFONOVA, T.P.; SEMIKHATOVA, Ye.N.; CHERNOVA, Ye.I.;
SHATSKIY, N.S., akademik, glav. red.; MENNER, V.V., zam glav. red.;
SEMIKHATOVA, S.V., prof., red. toma; KATLYAREVSKAYA, P.S., red. izd-
va; NOVICHKOVA, N.D., tekhn. red.

[Regional stratigraphy of the U.S.S.R.] Regional'naya stratigrafiya
SSSR. Glav. red. N.S.Shatskii. Moskva. Vol.5. [Stratigraphy of the
Middle Carboniferous sediments of the central and eastern parts of the
Russian platform based on the studies of Foraminifera] Stratigrafiya
srednekamennougol'nykh otlozhenii tsentral'noi i vostochnoi chasti Rus-
skoi platformy (na osnove izucheniia foraminifer). Pt.2. [Volga and Kama
Valleys] Povolzh'e i Prikam'e. 1961. 355 p. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy
institut (for Dalmatskaya). 2. Institut geologicheskikh nauk AN SSSR
(for Rauzer-Chernousova, Reytlinger). 3. Tsentral'naya nauchno-
issledovatel'skaya laboratoriya Upravleniya neftyanoy promyshlennosti
Permskogo Sovnarkhoza (for Safonova). 4. Nizhnevolzhskiy filial Vse-
soyuznogo nauchno-issledovatel'skogo geologorazvedochnogo neftyanogo
instituta (for Latskova, Orlova, Chernova). 5. Rostovskiy gosudarstven-
nyy universitet (for Semikhatova, Ye.N.)

(Volga Valley--Paleontology, Stratigraphic)

(Kama Valley--Paleontology, Stratigraphic)

SEMIKHATOVA, S.V.

Vereya horizon in the southern wing of the Moscow syncline and the eastern part of the Russian Platform. Dokl. AN SSSR 140 no.6: 1403-1406 0 '61. (MIRA 14:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut. Predstavleno akademikom D.V.Nalivkinym. (Russian Platform--Geology, Stratigraphic)

SEMIKHATOVA S.V.; CHIZHOVA, V.A.; MKRTCHYAN, O.M.

Stratigraphy and facies of the Lower Carboniferous of the Kana-
Kinel' Depression. Trudy VNIIG no.34:271-280 '62. (MIRA 15:?)
(Kuybyshev Province--Geology, Stratigraphic)
(Orenburg Province--Geology, Stratigraphic)

SEMIKHATOVA, S.V., prof., red.; YUNGANS, S.M., ved. red.; FEDOTOVA,
I.G., tekhn. red.

[Stratigraphic diagrams of Paleozoic sediments] Stratigraficheskie skhemy paleozoiskikh otlozhenii; trudy. Moskva, Gostoptekhizdat. Vol.3. [Carboniferous system]Kamennougol'naia sistema. Pod red. S.V.Semikhatovoi. 1962. 321 p. (MIRA 15:5)

1. Soveshchaniye po utochneniyu unifitsirovannykh stratigraficheskikh skhem poleozoya Volgo-Ural'skoy neftegazonosnoy provintsii, Moscow, 1960.

(Geology, Stratigraphic)

SEMIKHATOVA, S.V., prof., glav. red.; FILIPPOVA, M.F., red.;
MAKAROVA, T.V., red.; IVANOVA, Z.P., red.; CHULKOVA,
V.V., red.; BEKMAN, Yu.K., ved. red.; POLOSINA, A.S.,
tekhn. red.

[Resolutions of the Conference on the Study of Accurate
Unification of Stratigraphic Scales of the Upper Proterozoic
and Paleozoic in the Volga-Ural Oil and Gas Region held in
Moscow at the All-Union Scientific Research Institute of
Petroleum Geology and Prospecting, February 12-20, 1960]
Reshenia soveshchaniia po utochneniiu unifitsirovannykh
stratigraficheskikh skhem verkhnego proterozoya i paleozoya
Volgo-Ural'skoi neftegazonosnoi provintsii, sostoiavshegosia
v Moskeve pri VNIGNI s 12 po 20 fevralia 1960 g. Moskva,
Gostoptekhizdat, 1962. 47 p. (MIRA 16:5)

1. Soveshchaniye po utochneniyu unifitsirovannykh stratigra-
ficheskikh skhem verkhnego proterozoya i paleozoya Volgo-
Ural'skoy neftegazonosnoy provintsii, Moscow, 1960.
(Volga-Ural--Geology, Stratigraphic)

SEMIKHATOVA, S.V.

Brachiopoda from the key sections of the Bashkir stage in
mountainous Bashkiria. Trudy VNIIGI no.43:180-227 '64
(MIRA 18:2)

SEMINHATOVA, S.V.; GUBAREVA, V.S.

Brachiopoda in the boundary layers of the Tourmai and Viséan stages of the Buzuluk test hole no.1 and their stratigraphic significance. Trudy VNIIGI no.43:124-145 '64

(MIRA 18:2)

SEMIKHATOVA, S.V.

Correlation of the Namur of Western Europe with a cross section
of the Carboniferous of the Russian Platform based on the de-
velopment of Brachiopoda. *Bull. MOIP Otd. geol.* 40 no. 6:150-151
N-D '65. (MIRA 19:1)

1. Submitted May 13, 1965.

SEIKHATOVA, Ye. N.

"The Study of Fusulinids and the Stratigraphy of the Carboniferous Deposits of the Region of the Don-Medveditsa Dislocations," Dok. AN, 52, No. 6, 1946. Mbr., Rostov-on-Don State Univ. im. V. M. Molotov, -1946-.

SEMIKHATOVA, Ye. N.

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 2, 15-57-2-1278
p 11 (USSR)

AUTHORS: Semikhatova, Ye. N., Lazareva, Ye. P., Chelmokayeva,
S. S.

TITLE: New Data on the Stratigraphy of the Lower Tertiary
Deposits in the Stalingrad Volga District (Novyye
dannyye k stratigrafii nizhnnetretichnykh otlozheniy
Stalingradskogo Povolzh'ya)

PERIODICAL: Uch. zap. Rostovsk.-na-Donu un-ta, 1954, Vol 23, Nr 5,
pp 93-97

ABSTRACT: Bibliographic entry

Card 1/1

DAIMATSKAYA, I.I.; LATSKOVA, V.Ye.; ORLOVA, I.N.; RAUZER-CHERNOUSOVA, D.M.; REYTLINGER, Ye.A.; SAFONOVA, T.P.; SEMIKHATOVA, Ye.N.; CHERNOVA, Ye.I.; SHATSKIY, N.S., akademik, glav. red.; MENNER, V.V., zam glav. red.; SEMIKHATOVA, S.V., prof., red. toma; KATLYAREVSKAYA, P.S., red. izd-va; NOVICHKOVA, N.D., tekhn. red.

[Regional stratigraphy of the U.S.S.R.] Regional'naya stratigrafiya SSSR. Glav. red. N.S.Shatskii. Moskva. Vol.5. [Stratigraphy of the Middle Carboniferous sediments of the central and eastern parts of the Russian platform based on the studies of Foraminifera] Stratigrafiya srednekamennougol'nykh otlozhenii tsentral'noi i vostochnoi chasti Russkoi platformy (na osnove izucheniia foraminifer). Pt.2. [Volga and Kama Valleys] Povolzh'e i Prikam'e. 1961. 355 p. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut (for Dalmatskaya). 2. Institut geologicheskikh nauk AN SSSR (for Rauzer-Chernousova, Reytlinger). 3. Tsentral'naya nauchno-issledovatel'skaya laboratoriya Upravleniya neftyanoy promyshlennosti Permskogo Sovnarkhoza (for Safonova). 4. Nizhnevolzhskiy filial Vsesoyuznogo nauchno-issledovatel'skogo geologorazvedochnogo neftyanogo instituta (for Latskova, Orlova, Chernova). 5. Rostovskiy gosudarstvennyy universitet (for Semikhatova, Ye.N.)

(Volga Valley—Paleontology, Stratigraphic)

(Kama Valley—Paleontology, Stratigraphic)

GOL'DFARB, Emil' Mikhaylovich; KRAVTSOV, Aleksandr Feodos'yevich; RADCHENKO, Irina Ivanovna; ROZENGART, Yuriy Iosifovich; ~~SEMIKHIN, Iosif Danilovich~~; TAYTS, Noy Yur'yevich, prof., doktor tekhn. nauk, red.; CHUMACHENKO, T., vedushchiy red.; BESPATOV, R., tekhn. red.

[Calculations for heating furnaces] Raschety nagrevatel'nykh pechei. Pod red. N.IU. Taitsa. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1958.
421 p. (MIRA 11:8)

(Furnaces, Heating)

SEMIKIN, I.D.

Technical indices of open-hearth furnace performance. Izv. vys.
ucheb. zav.; chern. met. no.12:139-145 '60. (MIRA:14:1)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Open-hearth furnaces)

SEMIRIN, I. D.

PHASE I BOOK EXPLOITATION

SOV/5556

85

Moscow. Institut stali.

Novoye v teorii i praktika proizvodstva martenovskoy stali (New [Developments] in the Theory and Practice of Open-Hearth Steelmaking) Moscow, Metallurgizdat, 1961. 439 p. (Series: Trudy Mezhvuzovskogo nauchnogo soveshchaniya) 2,150 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy institut stali imeni I. V. Stalina.

Eds.: M. A. Glinkov, Professor, Doctor of Technical Sciences, V. V. Kondakov, Professor, Doctor of Technical Sciences, V. A. Kudrin, Docent, Candidate of Technical Sciences, G. N. Oyks, Professor, Doctor of Technical Sciences, and V. I. Yavoyskiy, Professor, Doctor of Technical Sciences; Ed.: Ye. A. Borko; Ed. of Publishing House: N. D. Gromov; Tech. Ed.: A. I. Karasev.

PURPOSE: This collection of articles is intended for members of scientific institutions, faculty members of schools of higher education, engineers concerned with metallurgical processes and physical chemistry, and students specializing in these fields.

Card 1/14

New [Developments] in the Theory (Cont.)

80V/5556

85

COVERAGE: The collection contains papers reviewing the development of open-hearth steelmaking theory and practice. The papers, written by staff members of schools of higher education, scientific research institutes, and main laboratories of metallurgical plants, were presented and discussed at the Scientific Conference of Schools of Higher Education. The following topics are considered: the kinetics and mechanism of carbon oxidation; the process of slag formation in open-hearth furnaces using in the charge either ore-lime briquets or composite flux (the product of calcining the mixture of lime with bauxite); the behavior of hydrogen in the open-hearth bath; metal desulfurization processes; the control of the open-hearth thermal melting regime and its automation; heat-engineering problems in large-capacity furnaces; aerodynamic properties of fuel gases and their flow in the furnace combustion chamber; and the improvement of high-alloy steel quality through the utilization of vacuum and natural gases. The following persons took part in the discussion of the papers at the Conference: S.I. Filippov, V.A. Kudrin, M.A. Glinkov, R.P. Nam, V.I. Yavoyskiy, G.N. Oyks and Ye. V. Chelishchev (Moscow Steel Institute); Ye. A. Kazachkov and A. S. Kharitonov (Zhdanov Metallurgical Institute); N.S. Mikhaylets (Institute of Chemical Metallurgy of the Siberian Branch of the Academy of Sciences USSR); A.I. Stroganov and D. Ya. Povolotskiy (Chelyabinsk Polytechnic Institute); P.V. Umrikhin (Ural Polytechnic Institute); I.I. Fomln (the Moscow "Serp i molot" Metallurgical Plant); V.A. Fuklev (Central Asian Polytechnic Institute)

Card 2/14

New [Developments] in the Theory (Cont.)

84
SGT/5556

and M.I. Beylinov (Night School of the Dneprodzerzhinsk Metallurgical Institute).
References follow some of the articles. There are 268 references, mostly Soviet.

TABLE OF CONTENTS:

Foreword

5

Yavovskiy, V. I. [Moskovskiy institut stali - Moscow Steel Institute].
Principal Trends in the Development of Scientific Research in Steel
Manufacturing

7

Filippov, S. I. [Professor, Doctor of Technical Sciences, Moscow Steel
Institute]. Regularity Patterns of the Kinetics of Carbon Oxidation
in Metals With Low Carbon Content

15

[V. I. Antonenko participated in the experiments.]

Levin, S. L. [Professor, Doctor of Technical Sciences, Dnepropetrovskiy
metallurgicheskii institut - Dnepropetrovsk Metallurgical Institute].

Card 3/14

New [Developments] in the Theory (Cont.)

SOV/5556

6

Grigor'yev, V.P. [Engineer], and Ye. V. Abrosimov [Moscow Steel Institute]. Effect of the Chemical Composition of the Charge and Slag on the Dephos- phorization Process in an Oxygen-Blown Bath	305
Svinolobov, N.P. [Engineer], and I.D. Semkin [Professor], [Dnepropetrovsk Metallurgical Institute]. Obtaining a Luminous Flame in Open-Hearth Furnaces Fired With Natural Gas	315
Okorokov, N.V. [Professor, Doctor of Technical Sciences, Moscow Steel Institute]. Electromagnetic [Inductive] Stirring of Metal in Melting Furnaces	324
Semenenko, I.I. [Engineer, Metallurgicheskiy kombinat im. Serova - Metallurgical Combine imeni Serov]. Combustion of High-Sulfur Content Mazout Gasified in the Open-Hearth Port in Making High- Quality Steel	330
Discussion of Papers	332
Card 11/14	

Oak

Procedures promoting the rapid growth of spot seeded oaks. *Arboreologia* no. 3, 1958.

SO: Monthly List of Russian Accessions, Library of Congress, September ² 1958, Uncl.

Country : USSR M
 Category : CULTIVATED PLANTS. COMMERCIAL. Oleiferous. Sugar-Bearing.
 Abs. Jour. : REF ZHUR-BIOL., 21, 1958, NO-96062
 Author : Zhadkhenko, P.G.; Mukaimova, A.Ya.
 Title : Sunflower Sowing Periods and Beds in Siberian Districts
 Orig. Pub. : V sb.: Kaslichn. kul'tury v vest. r-nakh SSSR. Krasnodar, "Sov. Kuban'", 1956, 108-117
 Abstract : Mid season planting of sunflowers is practical on the weeded plots in Siberia; weeds do not reduce the harvest in comparison with early planting and note it possible to destroy the weed shoots by preplanting cultivation. Midwinter sowing can be recommended only as an expedient. The best space kept between the rows should be considered 70 cm for the sunflowers in the districts of Siberia. Narrower spaces do not increase the yield and make mechanized care difficult. In
 Card: 1/2

CATEGORY : CULTIVATED PLANTS. COMMERCIAL
 Abs. Jour. : REF ZHUR-BIOL., 21, 1958, NO-96062
 Author :
 Title :
 Orig. Pub. :
 Abstract : square-pocket plantings, in relation to the spring store of soil moisture in the arid regions 1-2 plants should be left in alternation in the hills or just a single plant, while in regions with more moisture one can leave 2 or 1-2 alternately behind.
 --O.P. Plyusina
 Card: 2/2

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing.

M-5

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91760
Author : Semikhnenko, P.G.
Inst : All-Union Scientific Research Institute of Oil and Essential Oil Bearing Crops.
Title : Working Between the Rows of Sunflower Sowings.
Orig Pub : V sb.: Kratkiy otchet o nauchno-issled. rabote.Vses. n.-i. in-ta maslichn. i efiromaslichn. kul'tur za 1956 g. Krasnodar, "Sov. Kuban'", 1957, 244-249.
Abstract : No abstract.

Card 1/1

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing.

M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82442
Author : Semikhnenko, P.G.
Inst : All-Union Scientific Research Institute of Oil-Bearing and Essential Oil-Bearing Cultures.
Title : Methods of Intercropping Sunflowers
Orig Pub : Byul. nauchno-tekhn. inform. Vses. n.-i. in-t maslichn. i efiromaslichn. Kul'tur, 1957, No 3, 21-23
Abstract : Deep cultivation (12-16 centimeters) does not produce an increase in the yield since it leads to a severe desiccation of the soil. Shallow cultivation (6-10 centimeters) can be carried out with the smallest protective zone (8-10 centimeters) without a considerable injury to the root system. It secures the undercutting of the weeds and creation of a loose upper layer which protects the soil from excessive evaporation.

Card 1/1

SEMIKHENKO, P.G., kand. sel'skokhozyaystvennykh nauk.

Unexploited possibilities for increasing sunflower yield. Zemledelie
6 no.3:48-54 Mr '58. (MIRA 11:4)
(Sunflowers)

SEMUKHNEKO P.G.
SUDACHENKO, V.G., kand. sel'skokhozyaystvennykh nauk; DROGALIN, P.V., kand. sel'skokhozyaystvennykh nauk; SEMIKHNEKO, P.G., kand. sel'skokhozyaystvennykh nauk; IGNAT'YEV, B.K., kand. sel'skokhozyaystvennykh.

Let's avoid a routine application of cultivation practices.
Zemledelie 6 no.5:50-56 My '58. (MIRA 11:6)
(Krasnodarsk Territory--Wheat) (Tillage)

SEMIKHENKO, Pavel Grigor'yevich, kand.sel'skokhoz.nauk; KLYUCHNIKOV, A.I.,
kand.sel'skokhoz.nauk; TOKAREV, T.M., kand.sel'skokhoz.nauk;
YAGODKINA, V.P.; PIPERSKAYA, A.M.; ANTONOVA, M.M., red.; DEYEVA,
V.M., tekhn.red.

[Sunflower cultivation] Kul'tura podsolnechnika. Moskva, Gos.
izd-vo sel'khoz.lit-ry, 1960. 275 p. (MIRA 13:10)
(Sunflowers)

SEMIKHENKO, P.G., kand.sel'skookhozyaystvennykh nauk; KAMENNOERODSKAYA, V.P.

Methods for improving the productive qualities of sunflower seeds.
Agrobiologiya no.4:525-531 JI-Ag '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i
efiromaslichnykh kul'tur, Krasnodar.
(SUNFLOWER SEED)

SEMIKHENKO, P.G., kand.sel'skokhoz. nauk; IGNAT'YEV, B.K.

Sunflower under irrigation. Zemledelis 26 no. 4:73-74
Ap '64. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh
i efiromaslichnykh kul'ter.

SEMIKHENKO, P.G., kand. sel'skokh. nauk

Harvest the grain and till the field simultaneously. *Zemledelie* 26
no.7:19-24 J1 '64. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut masluchnykh i
efiromaslichnykh kul'tur.

SEMIKHENKO, P.G., kand. sel'skokhoz. nauk; PODOLYANSKIY, Yu.M.

Harvesting time for sunflowers. Zemledelie 27 no.8;57-58 Ag '65.
(MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i
efiromaslichnykh kul'tur.

SEMIKIN, A.T.

Diagnosis of a dissecting aortic aneurysm and its rupture. Zdrav.
Belor. 5 no.2:59-60 F '59. (MIRA 12:7)

1. Iz terapevticheskogo otdeleniya respublikanskoy bol'nitsy (glavnyy
vrach V.I. Khimakova, konsul'tant - prof. A.D. Adenskiy)
(AORTIC ANEURYSMS)

SEMIKIN, A.T.

Atypical forms of myocardial infarct. Zdrav.Belor. 4 no.3:
59-60 Mr '58. (MIRA 13:7)

1. Iz terapevticheskogo otdeleniya respublikanskoy bol'nitsy
Lechsanupravleniya (glavnyy vrach V.I. Khimakova, konsul'tant -
prof. A.D. Adenskiy).

(HEART--INFARCTION)

CA

PROCESSES AND PROPERTIES INDEX

Heating recuperators for the Siemens-Martin furnace.
 I. D. Semikin. Russ. 36,433, May 31, 1953. The performance of the furnace as well as of the recuperator is improved by introducing blast-furnace, producer or any other outside gas which is burned by the excess air in the flue gases or by air entering through leaky joints.

9

ASB-35.A METALLURGICAL LITERATURE CLASSIFICATION

SEARCH SYMBOLS

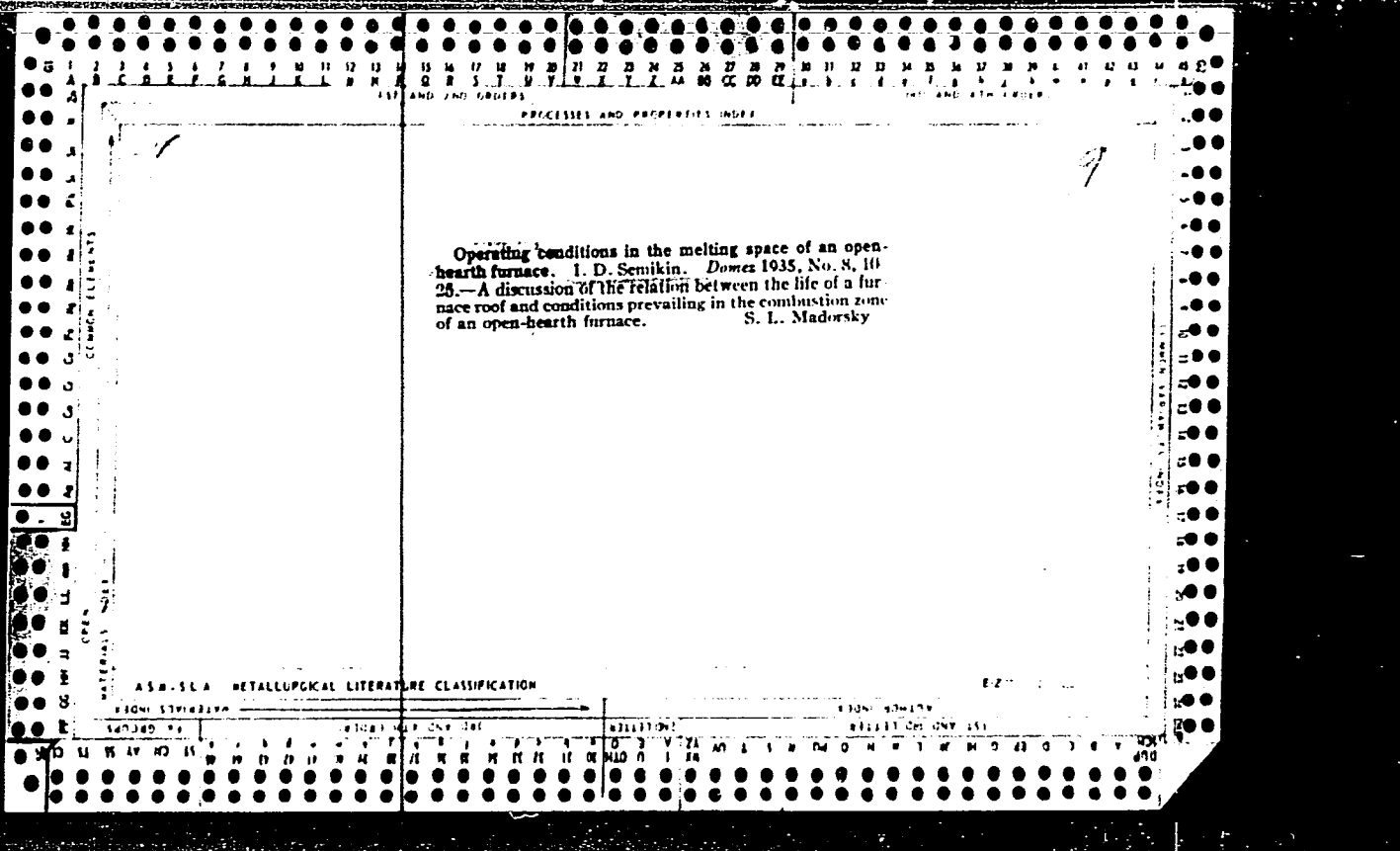
SEARCHED INDEXED

FILED

APR 1954

U.S. DEPARTMENT OF COMMERCE

U.S. BUREAU OF STANDARDS



SEMIKIN, I.D.

[Trudy vesesoyuzhnogo soveshchaniya martenovtsev] Proceedings of all-Union Consultation of the Open-Hearth Operators, ONTI, 1936.

SEMIKIN, I.D.

"Design of an Open-Hearth Furnace in the Light of Present-Day Stakhanovite Procedures", The Theory and Practice of Metallurgy No 1, 1936.

6 9

THEORETICAL PRINCIPLES OF CALCULATIONS IN CONNECTION WITH THE
DESIGN OF REHEATING FURNACES AND SOAKING PITS. I. Semkin.
(Stal, 1937, No. 12, pp. 29-42). (In Russian). The rates of heating
and cooling and the temperature distribution in ingots are considered
mathematically.

AS 6 S L A METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

5 7

Devices for the Removal of the Products of Combustion from Open-Hearth Furnaces. I. Semikin and L. Segun. (Stal, 1938, No. 5, pp. 30-35). (In Russian). The authors discuss the characteristics of the methods used to provide the draught necessary for the removal of the products of combustion from open-hearth furnaces. The ordinary chimney, the indirect- and direct-acting forced-draught flue and the direct-acting forced-draught flue combined with a boiler to utilise the waste-heat of the gases are discussed. The latter is regarded as being the most advantageous and reliable. Each furnace should be provided with two such boiler equipments, one being in reserve. Finally a scheme is suggested for the centralisation of the draught system of a number of open-hearth furnaces which could thus be combined with a central waste-heat boiler plant.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

E-Z

PROCESSES AND PROPERTIES INDEX

210

S

The Design of Open-Hearth Furnaces for Increased Production.
I. Semikin. (Stal, 1939, No. 9, pp. 16-19). (In Russian). Large capacity (300-350 ton) furnaces are capable of producing up to 1000 tons of steel in 8 hr. For this it is necessary to increase the heat supply during the charging period to 50-60 million cal. per hr. using forced draft at a pressure of 100-150 mm. of water. Utilization of the heat of the flue gases for steam raising is possible. The furnace should be made gas-tight by a steel shell. Gas and air uptakes and slag pockets and regenerators should have individual walls. Spaces between slag pockets and regenerators should be ventilated. The author discusses more particularly, and with some reference to experimental data and works experience, the design of the bath and the volume of the furnace, methods of supporting the furnace structure, port design, slag pockets, regenerators, reversing valves and flues.

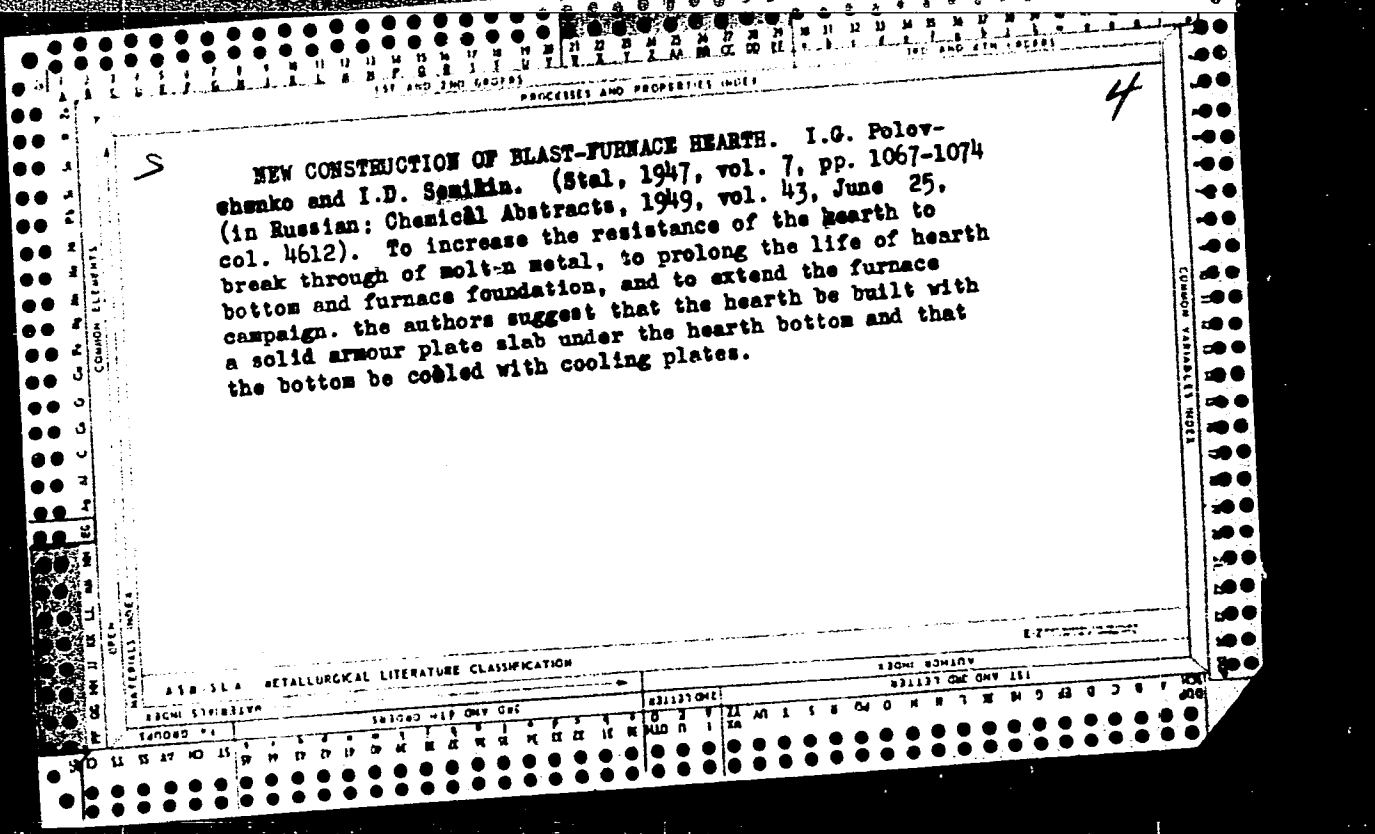
ASH-15A METALLURGICAL LITERATURE CLASSIFICATION

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	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

7

Thermal work in reverberatory furnaces. I. D. Sankin and M. D. Shabl. *Isotnye Metal.* 14, No. 3: 21-25 (1930); *Chimie & Industrie* 42, 821. The chief reason for the low efficiency of existing reverberatory furnaces lies in their insufficient thermal power. The optimum thermal power of these furnaces is 50-60 million cal. per hr., or about 300,000 cal. per hr. per sq. m. of hearth area, corresponding, for a 180-sq.-m. furnace, to a production of 1100 tons of Cu per 23 hr. with a heat consumption of 800,000 cal. per ton. It is necessary to modify the heat balance of the furnaces so as to obtain complete and intense combustion of the fuel over as short a distance as possible. A. Panneau-Continue.

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION



SEMIKIN, I. D.

IA 57129

USSR/Engin
Metallurgy
Furnaces

Dec 1947

"New Construction for Hearth of Blast Furnace,"
Prof I. D. Semikin, Dnepropetrovsk Metal Inst; I. G.
Polovchenko, Engr, Dneprodzerzhinsk Night Inst, 8 pp

"Stal'" No 12

Authors discuss new construction for hearths of
blast furnaces. Hearth has heavy bronze base under
the hearth block. Cooling plates are arranged under
the hearth block. Claim that with this arrangement
stability of hearth is increased, service period of
hearth block and foundations is lengthened, and
operating period of the furnace increases.

57129

SEMINKIN, I.D.

42319. SEMINKIN, I.D.-Dinamika Fakela svobodnoy strui Nauch. trudy (Dnepropetr. metallurg. in-t im Stalina), VYP 14, 1948, s 3-18-Bibliogr: 15 nazv.

SO: Letopis'Zhurnal'nykh Statey, Vol. 47, 1948.

SEMIKIN, I.D.

42320. SEMIKIN, I.D., STANKEVICH, K.O., -Ispytaniye novoy golovki martenovskoy pechi. Nauch, trudy (Dnepropetr. metallurg. in-t im. Stalina) VYP 14, 1948, s 19-27.

SO: Letopis'Zhurnal'nykh Statey, Vol. 47, 1948.

SEMIKIN, I. D.; BAUM, V. A.; BUDNIN, D. V.; VASHENKO, A. I.; GLINKOV, M. A.; GRANOVSKIY,
B. L.; KITAYEV, B. I.; KUZMIN, M. A.; MIKHAYLENKO, A. Ya.; NAZAROV, I. S.; PLOTNIKOV, L. A.;
TAYS, N. U.; TROIB, S. G.

Metallurgicheskie Peui (Metallurgical Furnaces), 975 p., 1951.

124-57-2-1975

Translation from Referativnyy zhurnal, Mekhanika, 1957, Nr 2, p 71 (USSR)

AUTHOR ~~Semikin, I. D.~~, Gol'dfart, E. M.

TITLE To the Theory of the Free Jet (K teorii svobodnoy strui)

PERIODICAL Nauch. tr. Dnepropetr. metallurg. in-ta, 1954, Nr 31, pp 3-15

ABSTRACT Differential equations are obtained, which determine the propagation of a plane and an axisymmetrical laminar jet in an infinite medium having the same physical properties. Formulas for the velocity distribution over a cross section and along the axis of the jet are given. It is shown that the dimensionless velocity profiles become similar, starting from a certain fully defined time criterion. The calculations conducted on the basis of the relationships obtained are confirmed satisfactorily by the experimental data of I. D. Semikin (Nauch. tr. Dnepropetr. metallurg. in-ta, 1948, Nr 14). However, it is necessary to note that the formulas proposed by the authors coincide with the first approximation of the solution obtained for similar problems earlier by Pai, S. J., (Mekhanika, Sb. Perv. i obz. in. period. lit. 1950, Nr 1; Quarterly Appl. Math., 1952, Vol 10, Nr 2).
Bibliography: 6 references M. M. Benilova
1. Jets--Theory 2. Mathematics

Card 1/1

124-57-1-689

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 89 (USSR)

AUTHOR: Semikin, I.D.

TITLE: The Laws Governing the Combustion Process of a Gas in a Torch Flame (Zakonomernosti fakel'nogo protsessa szhiganiya gaza)

PERIODICAL: Nauch. tr. Dnepropetr. metallurg. in-ta, 1955, Nr 33, pp 83-103

ABSTRACT: The velocity distribution in the various sections, the velocity variation along the axis, the gas-flow rate across the cross section, and the diameters of the cross section of the jet are determined by means of G.N. Abramovich's equations of the theory of the turbulent gaseous jet [Prikladnaya gazovaya dinamika (Applied Gasdynamics), Gostekhizdat, 1953] for values of the empirical coefficient $a = 0.080 - 0.085$. A correlation of the calculated and the experimental data establishes the effect on the length of the flame of the inner diameter of the torch (the nozzle diameter), the heat value of the fuel, the O_2 content of the air, and the excess air. Empirical formulas for the flame length are compiled with and without consideration of the

Card 1/2

124-57-1-689

The Laws Governing the Combustion (cont.)

entrance velocity of the gas and the air, and the temperature of the gas and the air. The effect of the crowding of a flame and the angle of convergence and distance between flames are examined only qualitatively.

A. B. Reznikov

1. Flames--Properties--Mathematical analysis 2. Gases--Combustion--Analysis

Card 2/2

SEMIKIN, I. D.

18
4
FE2c
Dynamics of the Solidification of Castings. I. D. Semkin and E. M. Gol'dfarb. (Leningradskoe Proizvodstvo, 1956, (2), 16-23). (In Russian). In this theoretical discussion of casting solidification, a non-classical treatment of heat flow is adopted. In this, a given layer starts to take part in the flow process only after a time interval which increases with the distance of the layer from the surface. The discussion includes the dynamics of the growth of the crust with a constant temperature of the casting surface; the influence of the mould material on the temperature gradient in the crust and of a gap or facing layer on crust formation; and the calculation of mould thickness, worked examples being given.

RB

SEMIKIN, I.D., professor; ROZENGART, Yu.I., kandidat tekhnicheskikh nauk, dotsent;
GOL'DFARB, E.M., kandidat tekhnicheskikh nauk.

Heating massive bodies by radiation. Stal' 16 no.3:252-256 Mr '56.
(MIRA 9:7)

1.Dnepropetrovskiy metallurgicheskiy institut.
(Heat--Radiation and absorption) (Electrometallurgy)

137-58-6-11679

Translation from. Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 65 (USSR)

AUTHORS Semikin, I.D., Averin, S.I.

TITLE. Controlling the Flame Jet in Open hearth Furnaces (Organizatsiya fakela plameni v martenovskikh pechakh)

PERIODICAL Tr. Donetsk. otd. Nauchno-tekhn. o-va chernoy metallurgii, 1957, Nr 5, pp 39-46

ABSTRACT When a free jet moves in an infinite space, the process of mixing consists of the capture of and transportation of the necessary amount of air into the depth of the flame and then of intimate intermixing thereof. The flame length (FL) depends upon the diameter of the burner, the heating value of the gas (calculation has to be in terms of heat value per unit weight), the O₂ content of the air, the velocities of the gas and air flows and the angle at which they meet. In open-hearth furnace practice, FL is not dependent upon the velocity of the gas, unless supplementary sources of energy are used in the form of compressed air. But the FL does depend upon air velocity, declining as air velocity increases. The angle of contact of gas and air must not be $>20^\circ$, because although the FL diminishes

Card 1/2

137-58-6-11679

Controlling the Flame Jet in Open Hearth Furnaces

in this case as the result of the impact of the flows, the aerodynamics of the flame are simultaneously impaired. Venturi ports should be modified in the following directions: 1) reduction of the dimensions of the gas port where reserve draft is available, 2) provision of multiple-jet burners if coke gas is available. The speed of outflow of cold coke gas should be ≥ 80 m/sec; 3) delivery of compressed air in high-pressure jets with Laval nozzles. It was found at one of the plants in Dnepropetrovsk that delivery of compressed air into the tank by means of two side nozzles reduced heat time by 30-40 min. A design has been developed of a port with an aerodynamic tank in which the major role is played by air and not gas.

M.M.

1. Open hearth furnaces--Control systems

Card 2/2

SEMIKIN, I.D., prof.

Analytical determination of the longitudinal profile and the dimensions of a laval nozzle. Izv. vys. ucheb. zav.; chern. met. 2 no.3:107-114 Mr '59. (MIRA 12:7)

1. Dnepropetrovskiy metallurgicheskiy institut. Rekomendovano kafedroy metallurgicheskikh pechey Dnepropetrovskogo metallurgicheskogo instituta.

(Gas flow) (Nozzles)

S/148/60/000/012/016/020
A161/A133

AUTHOR: Semikin, I. D.

TITEL: On the technical indices of open hearth furnace operation
(As a discussion)

PERIODICAL: Izvestiya bysshikh uchebnykh zavedeniy. Chernaya metallurgiya,
no. 12, 1960, 139 - 145

TEXT: The article deals with the problem of determining the output quota for open-hearth furnaces. The present methods are criticized with reference to the author 's own three works [Ref. 1: I. D. Semikin. Diskus-siya o rabote domennykh pechey na povyshennom davlenii (Discussion on Blast Furnaces Operating on Higher Pressure), NTO ChM, Dnepropetrovsk, 1958; Ref. 2: I. D. Semikin. Teplotekhnicheskaya otsenka topliva (Heat-Technological Fuel Rating), Trudy Dnepropetrovskogo metallurgicheskogo instituta, no. XXII, 1949; Ref. 3: I. D. Semikin. Osnovnyye razmery rabocheho pro-stranstva martenovskikh pechey (Basic Dimensions of the Effective Area of Open-Hearth Furnaces), Materialy k soveshchaniyu staleplavil'shchikov v Khar'kove, VNITO Metallurgov, May 1939] and calculations made in this field.

Card 1/4

On the technical indices of open hearth...

S/148/60/000/012/016/020
A161/A133

The authors emphasizes that the output capacity of a furnace depends on design as far as design results in a lower or higher heat capacity, i.e. a furnace will give a high output if its design permits the combustion of more fuel without ruining the brickwork, and the design of the head affecting the flame in the furnace is the most important design factor at the moment. He does not agree with the opinion of some metallurgists that low efficiency is inherent in large furnaces. Three factors are suggested to serve as a basis of productivity rating: I - The furnace heat capacity, M_{05} (M_{gen}), with metal output per 1 million calories (as the electro-metallurgists use to set the output quota by the furnace transformer capacity), though the maximum heat capacity depends on the designer's understanding of its importance. The higher the maximum heat power, the higher will be the absolute productivity, but the specific output per 1,000,000 cal will be gradually lower, and intensely operating furnaces will have a lower specific output index (which will not stimulate rational development). II - The furnace charge (E), for it is easily controllable. The annual furnace capacity would than be determined by the number of heats (n) per year:

$$P = nE,$$

Card 2/4

On the technical indices of open hearth...

S/148/60/000/012/016/020
A161/A133

though it would depend on the heat capacity, the charge weight, the number of work days a year, form of charge (liquid or cold iron), steel grade, etc, and would be possible for certain average conditions only (which is true for any methods). Besides this, a correction factor would have to be used, since the annual number of heats depends on the charge volume, and 12 - 16 heats a day are possible in a 5-ton furnace, and only 3 - 4 in 500-ton furnace. III - The furnace hearth area (F), or, actually, the metal bath surface area. This factor is just the index being used now, and the output per 1 m² of floor permits a comparison of furnaces of different sizes. It would be practical in the first approximation, but it has a negative side as well. The hearth area is not as dependably determinable as the charge E, and fair comparison of capacities would only be possible taking into account the real bath surface level. This is so for two reasons: 1) Designers want to conceal the real hearth area to get a "high" output index, and indicate excessive furnace wall thickness in drawings. Such thick walls are rapidly destroyed by slag (after 10 - 15 heats) in a narrow furnace, the width and the metal surface area become normal, but the metal output is still related to the smaller initial floor area; 2) Being of the opinion that the heat process is the faster the shallower the bath is, designers

Card 3/4

35082

S/704/61/000/002/006/006
D201/D302

24,5500
AUTHORS: Semikin, I.D., Professor, Kostogryzov, V.S., Candidate
of Technical Sciences, and Tsygankov, O.L., Engineer

TITLE: A heat radiation calorimeter

SOURCE: Ukraine. Gosudarstvennaya planvoya komissiya. Institut
avtomatiki. Avtomatizatsiya i priborostroyeniye; sbornik
nauchnykh trudov, no. 2, Kiyev, 1961, 153-164

TEXT: The authors describe a thermal radiation calorimeter based on the principle of temperature difference produced at a neat resistance by the thermal flux. The instrument consists basically of a hollow copper cylinder with a partition in its middle. The thickness of the cylinder walls and of the partition does not exceed 0.2 mm. The part of the cylinder above the partition acts as an absolutely black body and performs the function of a heat collector. The lower part of the cylinder is slotted, the slots acting as thermal resistances. The cylinder has a connection sleeve for the wiring of a thermocouple battery. The battery is made of copper-constant thermocouples, whose number is determined by the sensitivity
Card 1/3

S/704/61/000/002/006/006
D201/D302

A heat radiation calorimeter ...

of the instrument. The thermocouple battery is wound at the external cylinder surface in such a manner that the heat resistances be placed between the thermocouple junctions (hot junctions) placed against the surface of the heat collector and the junctions placed at the water-cooled part of the cylinder (cold junctions). The junctions are isolated from the cylinder surface by mica wafers. Mica is also used to insulate the thermocouples from the top. The heat collector, together with the thermocouples is placed in a protective envelope. A mirror-polished nickel foil is placed between the collector and the envelope; this arrangement makes the heat losses negligible. The whole arrangement is assembled into a separate unit, fixed at the face of the water-cooled bloc which at its other end has two pipes for the circulation of water and one for the wiring from the thermocouple battery to a potentiometer. The experiments have shown the linear dependence of the e.m.f. of the radiation calorimeter on the thermal flux; the temperature of the radiating body T_r was found to satisfy Eq. (17)

Card 2/3

38389

S/148/62/000/004/004/006
E081/E435

11-7200

AUTHORS: Semikin, I.D., Averin, S.I.
TITLE: Basic mechanism of a turbulent gas flame
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy.
Chernaya metallurgiya, no.4, 1962, 140-152

TEXT: The paper is a continuation of previous work. The similarity conditions in turbulent flow are analysed and a formula derived for transforming from one type of flow to another. The length of the flame is regarded as the sum of two lengths, the capture length in which the gas emerging from the nozzle captures some of the surrounding air and the transfer length in which the combustion is completed. The forces in the flame due to the difference between the densities of the gases, and the dimensionless Euler forces arising from the differences in static pressure are evaluated and a calculation made of the amount of air transferred in the capture length. A fifth power equation is obtained for the dimensionless length of the turbulent flame and the factors determining this length are briefly discussed.

Card 1/2

S/148/62/000/006/003/005
E081/E435

AUTHORS: Averin, S.I., Semikin, I.D.

TITLE: Combustion of a single component gas mixture in a turbulent flame

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.6, 1962, 146-154

TEXT: In a previous work (Izv.VUZ. Chernaya metallurgiya, no.4, 1962) the present authors found the formula for flame length

$$Z_{0\phi_{\text{ак}}} = \left[N_0(1+G) - \frac{1}{b_0} \right] \sqrt{\frac{\gamma_r}{\gamma_{\text{см}} \left(1 + \frac{i(G) \cdot i(\tau)}{Fr} Z_{0\phi_{\text{ак}}}^3 \right)}}, \quad (1)$$

In order to calculate flame length from this formula, it is necessary to know the mean composition and specific gravity of the gas mixture at the end of the capture path, and equations are quoted for (1) the weight fractions of combustible gas, of residual
Card 1/2

S/148/62/000/006/003/005
E081/E435

Combustion of a single ...

free oxygen, of the products of the reaction, of nitrogen and of unburnt gas; (2) the specific gravity of the gas mixture and (3) the mean temperature of the gas mixture. These formulae are applied to calculating the composition, thermal characteristics, specific gravity and flame length in the combustion of hydrogen and carbon monoxide; the results are shown in tabular and graphical form. The analysis is applicable to complex multi-component gas mixtures and gives good agreement with experiment. There are 6 figures. ✓

ASSOCIATION: Dnepropetrovskiy metallurgicheskii institut
(Dnepropetrovsk Metallurgical Institute)

SUBMITTED: June 19, 1961

Card 2/2

S/148/62/000/008/008/009
E194/E435

AUTHORS: Averin, S.I., Semikin, I.D.

TITLE: The combustion of multicomponent gas mixtures in a turbulent flame

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.8, 1962, 158-169

TEXT: General equations are first formulated for the combustion of a mixture of two combustible gases with oxygen. The combustion of mixtures of oxides of carbon and hydrogen is then considered and, on the basis of previous articles by the same authors (Izv.VUZ. Chernaya metallurgiya, nos. 4 and 6, 1962), a formula is derived for the ratio of the flame length to the gas nozzle diameter. An auxiliary graph is given to facilitate practical calculations with the formula. The combustion of hydrocarbons and of mixtures of several gases is then considered. Calculations are made of flame length as function of Froude Number for oxides of carbon, hydrogen, generator gas, natural gas, coke oven gas, blast furnace gas and Moscow city gas in an atmosphere of air for subsonic rates of gas flow. The results are compared with Card 1/2

The combustion of ...

S/148/62/000/008/008/009
E194/E435

published experimental data and agreement is good. The method can be used to assess the influence of various factors on flame-length. It is found that on burning mixtures of carbon oxides with hydrogen the flame length increases with the hydrogen content. When burning mixtures of hydrogen and hydrocarbons, and in particular with methane, the flame-length increases with the concentration of hydrocarbons. When burning mixtures of methane with hydrocarbons of the series C_nH_{2n+2} the flame-length increases as the methane concentration is reduced and the concentration of C_nH_{2n+2} hydrocarbons is increased. There are 3 figures. ✓

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut
(Dnepropetrovsk Metallurgical Institute)

SUBMITTED: November 10, 1961

Card 2/2

S/148/62/000/012/008/008
E081/E184

AUTHORS: Averin, S.I., and Semikin, I.D.

TITLE: Length of a turbulent gas flame issuing under high pressure from cylindrical and conical jets

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no.12, 1962, 162-173

TEXT: A formula for turbulent flame length derived previously by the present authors (Izv. vuz. Chern. met. no.8, 1962) is analysed and developed with special reference to conditions of high gas velocity, in which changes of gas density must be taken into account. The relationship between the specific gravity and the velocity of the gas is established, and two criteria, characterising respectively the relative gas flow and the initial gas compression, are obtained. Calculations are carried out for Shebelinka natural gas (92.3% CH₄, 4.21% C₂H₆, 0.9% C₃H₈, 0.33% C₄H₁₀, 0.46% C₅H₁₂, 1.39% N₂, 0.41% CO), and curves are given to show the dependence of flame length on relative gas flow. The flame length increases continuously with increasing gas flow, but at a decreasing rate up to a critical flow, after which the rate.

Card 1/2

Length of a turbulent gas flame ... S/148/62/000/012/008/008
E081/E184

increases again. Smaller diameter jets give shorter flames with a greater ratio of flame length to jet diameter. If the air is pre-heated, the flame length increases more rapidly with gas flow than if it is not; the flame length to jet diameter ratio depends less on jet diameter and the flame is longer. Measurements made with Shebelinka gas show good agreement with theory. There are 6 figures.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut
(Dnepropetrovsk Metallurgical Institute)

SUBMITTED: September 12, 1961

Card 2/2