SMIRNOV, A.I., kand. tekhn. nauk, dotsent; BROVKINA, Ye.P., aspirant

Investigating the wear resistance of sulfur containing cast irons. Izv. vys. ucheb. zav.; mashinostr. no.2:154-161 '65.

(MIRA 18:5)

1. Odesskiy politekhnicheskiy institut.

BROVKINA, Ye.P.; SMIRONOV, A.I.; GRISHCHUK, N.S.; DOTSENKO, P.V.; SOTNIKOV, A.A.

Effect of sulfur on the wear-resistance of cast iron. Izv.vys. ucheb.zav.; chern. met. 8 no.4:183-185 '65.

1. Odesskiy politekhnicheskiy institut.

(MIRA 18:4)

BROVKINA, Ye. T., Cand Biol Sci (diss) -- "The biology of the thrush and their forest-economy significance". Moscow, 1960. 16 pp (Moscow City Pedagogical Inst im V. P. Potemkin, Chair of Zoology), 150 copies (KL, No 10, 1960, 128)

TAVROVSKIY, V.A., doktor biol. nauk, otv. red.; BROVKINA, Ye.T.,
red.; SABLINA, T.S., red.

[Studies on the ecology, dynamics of abundance and diseases
of mammals of Jakutia] Issledovaniia po ekologii, dinamike
chislennosti i boleznia mlekopitaiushchikh IAkutii. Mo-
skva, Izd-vo "Nauka," 1964. 285 p.   (MIRA 17:6)

1. Akademiya nauk SSSR. Yakutskiy filial, Yakutsk. Institut
biologii.

YAKOBI, V.E.; KOKSHAYSKIY, N.V.; BORODULINA, T.L.; SHESTAKOVA,
      G.S., doktor biol. nauk, prof., otv. red.; BROVKINA, Ye.T.,
      red.izd-va; KHENOKH, F.M., takhn. red.

[Functional morphology of birds] Funktsional'naia morfolo-
giia ptits. Moskva, Izd-vo "Nauka," 1964. 91 p.
                                          (MIRA 17:4)

DEMENT'YEV, G.P., otv. red.; BROVKINA, Ye.T., red.

[Migrations of birds and mammals] Migratsii ptits i mlekopitaiushchikh. Moskva, Nauka, 1965. 158 p.
(MIRA 18:5)

1. Akademiya nauk SSSR. Otdeleniye obshchey biologii.

BROVKINA, Z.7.

"Use of anesthesia in eye clinics. Sbor. nauch. trud. SOGMI
no 14:198-204 '63.
(MIRA 18:9)

1. Respublikanskaya klinicheskaya bol'nitsa, Ordzhonikidze.
Nauchnyy rukovoditel' - prof. M.N. Buguloy.

BROVKO, Aleksey Petrovich; VORONTSOV, V.G., retsenzent; YEGOROV
V.Ye., retsenzent; ZAKHAROV, A.P., retsenzent; KROPACHEV,
V.P., retsenzent; PASTUKHOV, N.V., retsenzent;
PEREGUDOV, V.V., retsenzent; PONOMAREV, V.A., retsenzent;
RUDEV, A.M., retsenzent; KHROFUNSKIY, Ye.A., retsenzent;
SMIRNOV, A.A., inzh., retsenzent

[Contact networks in strip mines] Kontaktnaia set' na
kar'erakh. Moskva, Nedra, 1964. 207 p. (MIRA 18:2)

1. Inzhenerno-tekhnicheskiye rabotniki Korkinskogo tresta
ugol'nykh predpriyatiy (for all except Brovko).

ZHIVOTINSKIY,L.A., inzhener; BROVKO,I.A., inzhener

Continuous-flow process for welding joints on boilers in steam power installations. Svar.proizv. no.10:23-26 O'55.   (MLRA 8:12)

1. Vsesoyuznyy proyektno-tekhnologicheskiy institut Ministerstva tyazhelogo mashinostroyeniya
(Boilers--Welding)

Brovko, I.A.

SUBJECT: USSR/Welding

AUTHOR: Brovko, I.A.

TITLE: Universal Welding Manipulator (Universal'nyi svarochnyi mani-
             pulyator).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 4, pp 21-23 (USSR)

ABSTRACT: Design and operation of a holding device for various metal
             structures up to 1200 kg weight, symmetrical as well as unsym-
             metrical, (frames, beams, housing, etc). The device is hand-
             controlled, and enables the operator to manipulate the work-
             piece into convenient positions in order to get access to all
             sections.

             The experimental manipulator has been tested and accepted for
             series production. It is being produced by the plant "Metallist"
             and presently it is used by the Mogilev Crane Building Plant.
             It accommodates parts of up to 2500 x 2500 x 1000 mm in size,
             turns them 360° in the vertical as well as in the horizontal
             plane, and tilts up to 30° to one side. Its advantages are:
             no need for highly skilled operators, 50 % cut of time required

Card 1/2

135-4-7/15

135-4-7/15

TITLE: Universal Welding Manipulator (Universal'nyi svarochnyi mani-
              pulyator).

              for auxiliary operations, saving of space, simple design,
              reliability.

              The article contains 1 drawing, 1 kinematic scheme, 1 series
              of sketches, 1 photograph.

ASSOCIATION: ВПТИМТМ (VPTI MTM)   *All-Union Planning Technological Inst.
              *Min. Transport Machine-Building

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

25 (2)

AUTHOR: Brovko, I. A., Engineer

TITLE: The Mechanized Welding Manipulator "SM-5000"
                   (Svarochnyy mekhanizirovannyy manipulyator SM-5000)

ABSTRACT: The new "SM-5000" welding manipulator, designed by the
                   author, is described and illustrated. It accommodates
                   work of up to 3500x3500x1000 mm size and 5000 kg weight,
                   turns the work table 360° in 1 minute (both sides in
                   horizontal plane) or tilts it at 0.6 revolution per
                   minute on the horizontal axle, and lifts 700 mm by means
                   of a hydraulic table drive consisting of an asynchronous
                   electric motor, a vane pump and an oil container. All
                   functions can be handled by the control board. The first
                   experimental unit was completed in February 1958 at the
                   Moscow plant "Metallist" and successfully passed the
Card 1/2   tests. The manipulator reduces welding time by 10 -15%
                   and cuts down auxiliary work by 1.5 - 2 times.

The Mechanized Welding Manipulator "SM-5000"   SOV/135-59-4-9/18

Since July 1958, it has been in operation at the Kolomens-
kiy teplovozostroitel'nyy zavod im. Kuybysheva (Kolomna
Diesel-Locomotive Plant imeni Kuybyshev). The first mani-
pulators will be built in 1959 by the Moscow plant
"Metallist" for plants producing heavy machinery.
There is 1 photograph and two sets of diagrams. Engineer
A. I. Kleyner and Technician V. I. Karetnikova participated
in the development of the manipulator.

ASSOCIATION: Vsesoyuznyy proektno-tekhnologicheskiy institut tyazhëlogo
mashinostroyeniya (All-Union Institute of Heavy Machine-
Building Design and Technology).

Card 2/2

18(5), 25(1)   SOV/135-59-11-12/26

AUTHOR: Brovko, I.A., Engineer

TITLE: Universal Welding Manipulator   USM-1200

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 11, pp 29-31 (USSR)

ABSTRACT: The new welding manipulator of a 1200 kg lifting capacity (Fig 1)
             is fully mechanized. It was developed by the VPTI; in addition to
             the author of this article, the following persons participated in
             the work: A.I. Kleyner, V.A. Berezkina, Engineers and V.I. Karet-
             nikova, Technician. All movements of the work-piece fastened on
             the manipulator table are performed by individual electromechani-
             cal drives. The work-piece can rotate with a given speed around
             the table axis; it can be turned with respect to the horizontal
             axis or lifted. In Fig 2, a kinematic layout of the manipulator
             is given. It is intended, on the whole, for welding circumferen-
             tial seams; otherwise it can be used for hand- or automatic weld-
             ing of different metal structures. With the aid of this manipula-
             tor, units up to 1200 kg in weight and up to 2.5 x 2.5 x 1 m in
Card 1/2   size can be welded. The table can rotate in both directions with

SOV/135-59-11-12/26

Universal Welding Manipulator   USM-1200

a speed of 2.262-0.056 rpm. The experimental specimen of the manip-
ulator was manufactured in 1958 at the Plant "Metallist". Construc-
tion of the manipulator USM-1200 was inspected at the Institute of
Electric Welding imeni Ye.O. Paton of the AS UkrSSR, and was re-
commended for serial production. There are 2 diagrams and 1 photo-
graph.

ASSOCIATION: VPTI tyazhelogo mashinostroyeniya (VPTI of Heavy Machine-Building)

Card 2/2

18(5)

AUTHORS: Brovko, I.A., and Boyeva, K.I.

TITLE: New Welding Technology at the USSR National Economy Achievements
              Exhibition of 1959

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 11, pp 36-40 (USSR)

ABSTRACT: At the 1959 Exhibition, the following new welding equipment was
              demonstrated: Automatic submerged-arc welding (2 units are brief-
              ly described in this article); Electroslag welding (2 units);
              Welding of metals in protective gases (10 units); Automatic vibro-
              arc surfacing (3 units); Friction welding (1 unit); Cold (press)
              welding (5 units); Ultra-sonic welding of thin sheet metals (2
              units); Diffusion welding in vacuum (1 unit); Condenser welding
              of thin metals (5 units). The equipment and devices were con-
              structed by: TsNIITMASh, Institute of Electric Welding imeni Ye.
              O. Paton, NIAT, VNIIESO, NIIKhIMMASh, Chelyabinsk Plant imeni S.
              Ordzhonikidze, Ural Polytechnic Institute imeni S.M. Kirov, Kiyev
Card 1/2   Institute of Electrotechnics AS UkrSSR, Laboratory of Diffusion
              Welding at the Moscow Technological Institute of Meat and Milk

New Welding Technique at the USSR National Economy Achievements Exhibition of 1959

SOV/135-59-11-17/26

Industry, Experimental Welding Plant at the Mosgorsovnarkhoz, Institute of Metallurgy imeni Baykov AS USSR and Dnepropetrovsk Tube-Rolling Mill imeni Lenin. There are 1 diagram and 14 photographs.

Card 2/2

BROVKO, I.A., inzh.; SYSHCHIKOV, B.S., inzh.

USM-500 universal welding manipulator. Svar. proizv. no.3:32-34 Mr '61.
(MIRA 14:3)

1. Vsesoyuznyy proyektno-tekhnologicheskiy institut tyazhelogo mashinostroyeniya.
(Welding—Equipment and supplies)

GITLEVICH, A.D.; BROVID, I.A.

Auxiliary welding equipment. Avtom. svar. 14 no.11:64-70 N '61.
(MIRA 14:10)

1. Vsesoyuznyy proyektno-tekhnologicheskiy institut tyazhelogo mashinostroyeniya.
(Welding—Equipment and supplies)

BROVKO, I.A.; GITLEVICH, A.D.; BRAGINA, Ye.I., red.; VIKTOROVA,
Z.N., tekhn. red.

[Auxiliary equipment for assembling and welding operations]
Vspomogatel'noe oborudovanie dlia sborochno-svarochnykh rabot.
Moskva, TSINTIMASH, 1961. 48 p.   (MIRA 16:5)
            (Welding--Equipment and supplies)

... ... ; .. . ..

BROVKO, I. B. -- "The Study of the Writing of Oles' Gonchar in the Tenth
     Class of Intermediate School." Kiev State U imeni T. G. Shevchenko.
     Science Research Institute of Pedagogy Ukrainian SSR. Kiev, 1955.
     (Dissertation for the Degree of Candidate in Pedagogical Sciences.)

So; Knizhaya Letopis' No, 3, 1956

AUTHORS: Brovko, I.I., Volkov, A.N., Engineers   SOV-118-58-8-2/24

TITLE: Experimental Exploitation of the "KS-2m" Combine Operation
            Machine in the Kuzbass Mines (Opytnaya ekspluatatsiya kom-
            bayna KS-2m na shakhtakh Kuzbassa)

PERIODICAL: Mekhanizatsiya trudoyëmkikh i tyazhëlykh rabot, 1958, Nr 8,
            pp 6-8 (USSR)

ABSTRACT: The "KS-2m" coal combine operation machine was built in the Anzherskiy
            plant according to the designs of the Kuznetskiy filial
            Giprouglemasha (The Kuznetsk Branch of the Giprouglemash).
            It was tested in mines of the Kuzbass.   It was designed
            for the mechanization of extracting, loading and delivery
            operations, in the exploitation of 1.2 - 2 m thick slanted
            coal seams. Its average productivity was from 10,800 to
            14,230 tons a month. Detailed informations on its con-
            struction and power requirements are given. It was also found
            that almost all parts of the combine must be reinforced,
            changed or rebuilt. There are 2 tables and 1 figure.

            1. Mining industry--USSR   2. Mines--Equipment

Card 1/1

BROVKO, I.I., inzh.; VOLKOV, A.N., inzh.

Experimental use of KS-2M plowing arrangement in Kuznetsk Basin mines. Ugol' 34 no.1:41-46 Ja '59.   (MIRA 12:1)
     (Kuznetsk Basin--Coal mining machinery--Testing)

BROVKO, M.

With words and deeds. Mast.ugl. 9 no.1:8-8a Ja '60.

1. Shakhta No.13, g.Stalino.   (MIRA 13:8)
          (Donets Basin--Coal mines and mining)
          (Trade unions)

BROVKO, S. M.

"On the problem of larvicidal effects of poisonous plants on the larva if the malaria mos-
(Anopheles maculipennis)," Nauch. zapiski (Dnepropetr. gos. un-t), Vol. XXXII, 1948,
p. 279-84

SO: U-3950, 16 June 53, (Letopis, 'Zhurnal 'nykh Statey, No. 5, 1949).

BROVKO, S.M.

Data on the Ixodidae of the Veliko-Anadol' Forest. Nauk.zap.
Dnipr.un. 48:165-167 '55.   (MIRA 10:11)
(Ol'ginka District--Ticks)

USSR/Zooparasitology - Mites and Insects as Diases Vectors.   G-3

Abs Jour   : Ref Zhur - Biol., No 10, 1958, 43427

Author   : Brovko, S.M.
Inst   :
Title   : Ixodidae Ticks in Artificial Forests of the Steppe Zone
              of UkrSSR.

Orig Pub   : Nauchn. zap. Dnepropetr. un-t, 1955, 54, 61-65.

Abstract   : 6 species of ticks of the Ixodidae family are mentioned;
              Ixodes ricinus L., I. crenulatus Koch, Haemaphysalis punc-
              tata Can. et Fanz., Dermacentor marginatus Sulz., Rhipice-
              phalus rossicus Jak. et K.-Jak., Hyalomma plumbeum Panz.

Card 1/1

FAL'KOVSKIY, V.B.; BORISOVICH, I.G.; ASTAKHOVA, I.A.; BROVKO, S.F.;
FRENKLAKH, Zh.M.; L'VOV, S.V.

Production of monobasic and dibasic aromatic acids. Khim.
prom. 41 no.10:735-736 O '65.   (MIRA 18:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
Lomonosova.

BROVKO, V.

Beacon light of Tyumen'. Prof.-tekh. obr. 18 no.10:18-20 '61.
(MIRA 14:11)

1. Nachal'nik Tyumenskogo oblastnogo upravleniya proftekhobrazovaniya.
(Tyumen' Province—Farm mechanization—Study and teaching)

BROVKO, V.N.

Improved system of preheating petroleum in thermochemical salt-eliminating installations. Neftianik 1 no.9:6-7 S '56. (MLRA 9:11)

1. Nachal'nik tsekha Khabarovskago neftepererabatyvayushchego zavoda imeni S. Ordzhonikidze.
(Petroleum--Refining)

15-57-12-17261

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 12, pp 80-81 (USSR)

AUTHOR: Brovkov, G. M.

TITLE: Origin of Dolomites in Zolotaya Lipa (K voprosu o genezise dolomitov Zolotoy Lipy)

PERIODICAL: Nauk. zap. Chernivets'k. un-t., 1956, Vol 22, pp 142-150

ABSTRACT: Outcrops of dolomites lying directly above the red stratum of Lower Devonian can be seen on both shores of Zolotaya Lipa reka (River) between the villages of Laturchin, Zavadovka and Korzhova. The author presents a lithological section of this dolomitic stratum of the Middle Devonian and breaks it into the following structural and textural types: 1) medium-grained dolomites, either stratified horizontally or massive, exhibiting no caverns; 2) uneven-grained, mainly fine-grained and unstratified, cavern-forming dolomites; 3)

Card 1/3

Origin of Dolomites in Zolotaya Lipa (Cont.)

fragmented dolomites (consisting of angular fragments of mainly
fine-grained dolomites cemented with nonuniform-grained dolomitic
mass). The dolomites of the first type are considered by the author
to be the product of diagenetic recrystallization of a limey deposit
and also of the epigenetic recrystallization of previously consoli-
dated and partially dolomitized carbonates. Brecciated fragmental
dolomites are considered to be a result of reworking of the lithified
dolomites which were lifted from time to time above the level of the
water in the littoral zone of the reservoir. The region to the west
of Koropets reka (River) underwent some small subsidences at the
beginning of Middle Devonian. These subsidences were accompanied by
marine transgressions from the southwest. In the middle and lower
course of Zolotaya Lipa reka (River) and at the outlets of Koropets
reka (River) there originated quiet, shallow, and thoroughly warmed
lagoons of weakly reducing character. With only an insignificant
supply of clastic materials, some fairly pure dolomitic deposit was
originally formed within these lagoons; with time, this deposit was
substantially recrystallized. In this way the dolomites of the first
type originated. The following period was characterized by the
Card 2/3

15-57-12-17261

Origin of Dolomites in Zolotaya Lipa (Cont.)

deposition of primarily limey deposits which quickly underwent a diagenetic dolomitization and lithification; this was accompanied by the lifting of strongly dolomitized rocks above the level of the water and by their destruction in the littoral zone of the lagoons. This stage was responsible for the formation of the dolomites of the second and the third types. The presence of coral remnents in the dolomites of the second type points to the fact that the dolomitization of the rock took place during the stage of epigenesis because corals cannot live under the conditions suitable for the formation of primary dolomite.

Card 3/3   S. M. Korenevskiy

BROVKOV, G.N.

Formation of red beds of the Lower Devonian of the Dniester
region. Dokl.AN SSSR 94 no.1:121-124 Ja '54.   (MLRA 7:1)
  (Dniester Valley--Geology, Stratigraphic)
                        (Geology, Stratigraphic--Dniester Valley)

BROVKOV, G.N.

Presence of alluvial sediments in the upper Lias of Daghestan.
Trudy Geol.inst.Dag.fil. AN SSSR 1:230-235 '57.   (MIRA 14:9)
(Chirakhchay Valley--Alluvial lands)

BROVKOV, G.N.

Siliceous and carbonaceous cementing materials in different facies
of terrigenous rocks. Izv. Sib. otd. AN SSSR no.2:33-42 '58.

(MIRA 11:9)

1.Dagestanskiy filial AN SSSR.
(Rocks, Sedimentary) (Silica) (Carbonates)

AUTHOR: Brovkov, G.N.   SOV-11-58-9-12/14

TITLE: On the Book by A.G. Aliyev and V.P. Akayeva "The Petrography
             of Jurassic Deposits of the South-Eastern Caucasus" (O knige
             A.G. Aliyeva i V.P. Akayevoy "Petrografiya Yurskikh otlozheniy
             Yugo-Vostochnogo Kavkaza")

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1958,
             Nr 9, pp 101-102 (USSR)

ABSTRACT: This is a review of the above-mentioned book, published by the
             Academy of Sciences of the Azerbaydzhan SSR, in 1957.

             1. Geology--USSR

Card 1/1

3(0)

AUTHOR: Brovkov, G. N.   SOV/20-122-6-35/49

TITLE: Zones and Phases of Mineral Formation in Terrigenous, Lower
               Alenian Rocks of Southwestern Dagestan   (O zonal'nosti i
               stadiynosti protsessov mineraloobrazovaniya v terrigennykh
               porodakh nizhnego aalena yugo-vostochnogo Dagestana)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6, pp 1079 -
               1082   (USSR)

ABSTRACT: Various sediments have contributed to the formation of thick,
               terrigenous rocks mentioned in the title, from alluvium to
               typical marine sediments, including Flysch. They grade into
               one another regularly from northeast to south and southwest.
               A section of coal-bearing beds, about 2300 m thick, occurs
               in the northern and northeastern part of the region. The
               terrigenous components of these beds (minerals and rock
               fragments) show a considerable constancy. The coal-bearing
               beds and the typical marine sediments which are paragenetically
               related to them show a predominance of polymictic rocks.
               The most widely distributed diagenetic minerals: quartz,
               siderite (sideroplesite), ankerite (and dolomite), calcite,
Card 1/4   and pyrite are, as a rule, of different ages despite their

Zones and Phases of Mineral Formation in Terrigenous,   SOV/20-122-6-35/49
Lower Alenian Rocks of Southwestern Dagestan

occurrences in the same rocks. The authigenic assemblage is
not only very qualitatively varied, but in addition it is
irregularly distributed, depending upon the facies relation-
ships of the rocks. This facies relationship (Fig 1) for
sandy-aleurolithic rocks could be determined by understanding
the relative roles of the individual cements, followed by a
calculation of the so-called "Cement Number" (explained in
a footnote). An analysis of the data has shown a clear
heterogeneity for the distribution of the primary, authigenic
minerals. Along the contact between the continent and the sea,
definite and authigenic mineral zones appear to occur, which
grade gradually into one another. These zones are: 1. a
quartz zone, containing minor amounts of siderite and ankerite
(alluvial deposits). 2. a quartz-siderite-ankerite zone
(deltaic deposits). 3. an ankerite-siderite zone, containing
minor amounts of quartz (deltaic tongues into marine deposits).
4. a calcite-ankerite-siderite zone (marine deposits). Another
characteristic of diagenetic mineral formation is the presence
of phases. The formation of the diagenetic minerals proceeded
in a definite order, which corresponds to the development of

Card 2/4

· Zones and Phases of Mineral Formation in Terrigenous,   SOV/20-122-6-35/49
Lower Alenian Rocks of Southwestern Dagestan

the authigenic minerals. The earliest formed mineral is
glauconite, and the latest formed mineral is siderite;
ankerite is, after siderite, the latest formed mineral. If
calcite occurs with quartz and ankerite or with siderite,
calcite is always the latest formed mineral. Dolomite is
approximately contemporaneous with ankerite and only rarely
forms after calcite. A scheme for the sequence of mineral
formation is given. Both the phasic character and the
formation of diagenetic minerals of the zones are directly
related to the conditions of deposition. Paleoclimatological
conditions of this time are discussed, and their influence
on the formation of the minerals mentioned is determined.
There are 1 figure and 2 Soviet references.

ASSOCIATION: Institut geologii Dagestanskogo filiala Akademii nauk SSSR
(Geological Institute of the Dagestan Branch of the Academy
of Sciences, USSR)

PRESENTED: June 3, 1958, by N. M. Strakhov, Academician
Card 3/4

BROVKOV, G.N.

Argillites in the Jurassic coal-bearing strata of Daghestan.
Dokl.AN SSSR 133 no.4:931-934 Ag '60. (MIRA 13:7)

1. Institut geologii i geofiziki Sibirskogo otdeleniya Akademii
nauk SSSR. Predstavleno akad. N.M.Strakhovym.
(Daghestan--Argillite)

BROVKOV, G.N.

Concretions in the Aalenian coal-bearing deposits of Daghestan.
Dokl. AN SSSR 135 no.3:705-708 N '60.   (MIRA 13:12)

1. Institut geologii i geofiziki Sibirskogo otdeleniya Akademii
nauk SSSR. Predstavleno akad. N.M.Strakhovym.
                    (Daghestan—Concretions)

BROVKOV, G.N.; MOSKALENKO, T.A.

Leptochlorite horizon in middle Jurassic deposits of contral Daghestan.
Dokl.AN SSSR 136 no.1:163-166 Ja '61.   (MIRA 14:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSSR i
Institut geologii Dagestanskogo filiala AN SSSR. Predstavleno
akademikom N.M.Strakhovym.
                (Chokh region—Geology, Stratigraphic)
                        (Leptochlorite)

BROVKOV, G.N.

Basic characteristics of the diagenesis of Aalenian coal-bearing sediments in Daghestan. Izv. AN SSSR. Ser.geol. 27 no.6:62-72 Je '62. (MIRA 15:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.

(Daghestan—Coal geology)

BROVKOV, G.N.; FROLOVA, V.T.

Modified bentonite rocks in the Devonian of the Tuva and Minusinsk
Depressions. Dokl. AN SSSR 143 no.4:943-946 Ap '62.
(MIRA 15:3)
1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
Predstavleno akademikom N.M.Strakhovym.
    (Tuva A.S.S.R.--Bentonite) (Minusinsk region--Bentonite)

BROVKOV, G.N.

Facies and paleogeographic factors in the accumulation of Lower
Aalen sediments in southeastern Daghestan. Trudy Geol.inst.Dag.
fil. AN SSSR 2:10-24 '60.   (MIRA 15:12)
                    (Daghestan—Geology, Stratigraphic)

BROVKOV, G.N.

Sedimentary-telepyroclastic formations, a special type of rock
associations. Trudy Lab. paleovulk. Kazakh. gos. un. no.2:68-72
'63.
                                                        (MIRA 17:11)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.

BROVKOV, G.N.; MOSKALENKO, T.A.

First find of conglomerates containing pebbles of Pre-Jurassic
igneous and metamorphic rocks in the Bajocian of southeastern
Daghestan. Trudy Geol.inst.Dag.fil. AN SSSR 2:165-168 '62.
(MIRA 15:12)

(Daghestan—Conglomerate)

BROVKOV, G.N.

Ash tuffs in Middle Devonian sediments in the Tuz-Tag salt mine region (southern Tuva). Geol. i geofiz. no.4:126-132 '63.

(MIRA 16:10)

1. Krasnoyarskaya kompleksnaya laboratoriya Instituta geologii i geofiziki Sibirskogo otdeleniya AN SSSR.

BROVKOV, G.N.

Trace elements in the Middle Paleozoic sediments of the Tuva inter-
montane depression. Lit. i pol. iskop. no.3:140-149 My-Je '64.
(MIRA 17:11)

1. Institut geologii i geofiziki, Novosibirsk.

BROVKOV, G.N.

Effect of pyroclastic material on the composition of Devonian
and Lower Carboniferous sediments in Tuva. Lit. i pol. iskop.
no.2:77-88 Mr-Ap '64.
(MIRA 17:6)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.

BUKOVKOV, G.N.; BUCHARSKAYA, G.S.

Facies-palaeogeographic conditions governing the formation of
Silurian formations in Tuva. Geol. i geofiz. no.4:66-77 '65.
(MIRA 18:8)

1. Krasnoyarskaya kompleksnaya laboratoriya Sibirskogo
otdeleniya AN SSSR.

BROVKOV, G.N.; GRAYZER, M.I.; MOGILEV, A.Ye.

Conditions governing the accumulation of Lower Carboniferous
sediments in the eastern part of the Sayan-Altai area. Geol.
i geofiz. no.1:106-123 '65.   (MIRA 18:6)

1. Krasnoyarskaya kompleksnaya laboratoriya Instituta geologii i
geofiziki Sibirskogo otdeleniya AN SSSR.

BROVKOV, G.N.

Laumontite mineralization in the Devonian volcanic sedimentary
layer of the Minusinsk trough. Lit. i pol. iskop. no.3:35-44
My-Je '65. (MIRA 18:10)

1. Institut geologii i geofiziki Sibirskogo filiala AN SSSR.
Novosibirsk.

BROVKOV, G.N.; MOGILEV, A.Ye.

Classification of terrigenous sedimentary rocks according to
their composition. Lit. i pol. iskop. no.6:67-74 N-D '65.
(MIRA 18:12)

1. Krasnoyarskoye otdeleniye Sibirskogo nauchno-issledovatel'-
skogo institut geologii, geofiziki i mineral'nogo syr'ya.
Submitted April 12, 1965.

BROVKOV, G.N.; GRAYZER, M.I.; MOGILEV, A.Ye.

New data on the Lower Carboniferous paleogeography of the
Altai-Sayan region. Izv. AN SSSR. Ser.geol. 30 no.11:93-97
N '65.
(MIRA 18:12)

1. Laboratoriya osadochnykh poleznykh iskopayemykh Gosudarstven-
nogo geologicheskogo komiteta SSSR, Moskva i Krasnoyarskoye
otdeleniye Sibirskogo nauchno-issledovatel'skogo instituta
geologii, geofiziki i mineral'nogo syr'ya, Novosibirsk. Submitted
November 19, 1964.

BROVKOVA, L.V.

Attachment for cutting grooves on a machine for regulating drum winders. Obm.tekh.opyt.[MLP] no.20:25-26 '56.

(MIRA 12:11)

(Textile machinery--Maintenance and repair)

BROVKOVA, L.V.

Improving filters for the physical purification of waters.
Obm.tekh.opyt.[MLP]   no.20:36-37 '56.   (MIRA 12:11)
(Filters and filtration)

BROVKOVA, M.; LAPUSHONOK, Yu., inzhener.

Preparation for removing oil from polished wooden surfaces.
Prom.koop. no.11:32-33 N '55.   (MLRA 9:5)

1. Zaveduyushchiy Eksperimental'noy laboratoriyey Latpromsoveta.
                    (Furniture industry)

BROVKOVICH, D.; GALKIN, M.; KOMAROV, G.; FEDOSEYEV, K., redaktor; SHITIKOVA, Ye., redaktor; LEBEDEV, A., tekhnicheskiy redaktor.

[Intrafactory business cost accounting] Vnutrizavodskii khozraschet. Moskva, Gosfinizdat, 1955. 146 p.   (MLRA 9:4)
                        (Factories--Finance)

BROVKOVICH, D.A.

BROVKOVICH, D.A. Taganrog. Geograficheskii oche k.   Taganrog, Krasvedcheskii muzei,
1948. 26 p.

SO: LC, Soviet Geography, Part II, 1951, Unclassified

BROVKOVICH, D.A.; POPOV, A.A.; ZIMIN, A.I.; KOMAROV, G.V.;
    ABROSKIN, P.I.; ZAV'YALOVA, A.N., red.; GERASIMOVA, Ye.S.,
    tekhn. red.

[Industrial planning in an economic region; practice of the
Rostov Economic Council] Planirovanie promyshlennosti v ekono-
micheskom raione; opyt Rostovskogo sovnarkhoza. Moskva, Ekonom-
izdat, 1962. 187 p.   (MIRA 15:7)
                    (Rostov Province—Economic policy)

SOV/143-59-3-19/20

14(9)

AUTHOR: Brovkovich, G.N., Candidate of Technical Sciences, Docent; Livshits, I.M., Candidate of Technical Sciences, Docent

TITLE: The Determination of the Mean Flow Velocity by Instantaneous Velocities (Ob opredelenii sredney skorosti potoka po mgnovennym skorostyam)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 3, pp 150-153 (USSR)

ABSTRACT: Usually, time-averaged values of pulsating velocities at different points of a flow are used for determining the mean flow velocity in a useful section. The authors established that instantaneous velocities may be used instead of averaged velocities, providing that there is an adequate number of measuring points. The error caused by this exchange will be small due to the compensation effect. Thereby, in a number of cases, the necessity of using time-averaged point velocities will be eliminated and the mean velocity in a useful section may be calculated by instantaneous

Card 1/5

The Determination of the Mean Flow Velocity by Instantaneous
Velocities

SOV/143-59-3-19/20

point velocities. The aforementioned compensation
will occur in case the instantaneous velocities are
independent random values for the different points.
The authors determine root-mean-square value of the
difference V-$\overline{V}$ designated by $\mathcal{E}_V$. Designating the
means velocity in a useful flow section by $\overline{V}$, deter-
mined by some methods of time-averaging the point
velocities, and the mean velocity by V, determined
by the same method, but using the instantaneous
velocities at the same points, the authors present
two formulae for $\overline{V}$ and V:

$$\overline{V} = \sum_{k=1}^{n} \gamma_k \overline{V}_k , \qquad V = \sum_{k=1}^{n} \gamma_k V_k$$

V_k - instantaneous velocities of a flow at points
with the number k; $\overline{V}_k$ - time averaged values at the
same points; n - number of points for the entire

Card 2/5

The Determination of the Mean Flow Velocity by Instantaneous Velocities   SOV/143-59-3-19/20

useful section; a_k - factor, depending on the quadrature formulae used for determining the mean velocity in the vertical, on the number and location of the latter and one the shape of the useful section. Taking into consideration that the measurements of the velocities V_k at neighboring points is performed at intervals adequate for an essential change of the pulsating velocity, amounting usually to a fraction of a minute. Then, the velocity V_k may be considered as a random value and in this case

$$DV = \sum_{k=1}^{n} a_k^2 \, DV_k$$

whereby D is the dispersion of the value under consideration. This formula may be written in the following manner:

$$\sigma_V^2 = \sum_{k=1}^{n} a_k^2 \, \sigma_{V_k}^2$$

Card 3/5

SOV/143-59-3-19/20

The Determination of the Mean Flow Velocity by Instantaneous
Velocities

If $\mu_k = \dfrac{r}{V_i}$ then

$$\tilde{Y} = \sqrt{\dfrac{r}{k}}$$

The magnitude of the relative mean square error will
be

$$\dfrac{\partial_i}{\partial} = \sqrt{\dfrac{\sum_{k=1}^{n}}{V}}$$

The authors present a table with data of pulsation
velocity characteristics for different arms of the
Mississippi river, compiled by A.A. Kalinske /Ref 5/
for the Second Hydraulic Conference, University of
Iowa, 1943. The authors state that additional experi-

Card 4/5

The Determination of the Mean Flow Velocity by Instantaneous Veclocities   SOV/143-59-3-19/20

mental investigations are required, especially of pulsation velocity changes under different conditions in an open flow and under an ice cover. There are 1 table and 5 references, 1 of which is American and 4 Soviet.

ASSOCIATION: Leningradskiy politekhnicheskiy institut imeni M.I. Kalinina (Leningrad Polytechnic Institute imeni M.I. Kalinin) Kafedra gidrologii i vodosnabzheniya BPI - Belorusskiy politekhnicheskiy institute (Chair of Hydrology and Water Supply of BPI - Belorussian Polytechnic Institute)

SUBMITTED: December 22, 1958

Card 5/5

L 13396-63   BDS/EWT(d)/FCC(w)   AFFTC   IJP(C)

ACCESSION NR: AP3001460

S/0052/63/008/002/0217/0218

AUTHOR: Brovkovich, G. N.; Linnik, Yu. V. (Leningrad)   52

TITLE: Similar estimates using the method of least squares

SOURCE: Teoriya veroyatnostey i yeye primeneniya, v. 8, no. 2, 1963, 217-218

TOPIC TAGS: chi-square, regression, estimation, similar region

ABSTRACT: The observation that when X and Y are independent with the chi-square distribution, then X/Y and X + Y are independent leads to simple constructions of similar regions for certain parameters in certain regression models. Orig. art. has: 8 formulas, 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 11Jan62

DATE ACQ: 17Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 002

OTHER: 001

Card 1/1

BROVKOVICH, Ye.A.

The SKTP 560-3200/35 agricultural complete transformer substation.
Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. 17
no.7:43-44 Jl '64.
(MIRA 17:10)

"Method for determining the time limit for mine construction. Tr. from the Russian."
Uhli, Praha, Vol 3, No 11, Nov. 1953, p. 324

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

AUTHOR: Broyman, M.Ya., Engineer.   133-5-22/27

TITLE: Designing of the rolling mill cooling beds taking into
           consideration convective heat exchange. (Raschet prokat-
           nykh kholodil'nikov s uchetom konvektivnogo teploobmena)

PERIODICAL: "Stal'" (Steel), 1957, No.5, pp. 466-467 (U.S.S.R.)

ABSTRACT: A formula was deduced, eq.(23), for calculating the
           cooling time of metal on cooling beds in which heat exchange
           by convection was also considered. It is claimed that a good
           agreement between calculated and actually observed cooling
           time was obtained. There are 4 Slavic references.

ASSOCIATION: Yuzhno-Ural Machine Building Works. (Yuzhno-Uralskiy
           Mashinostroitelnyy Zavod)

AVAILABLE:

Card 1/1

ACC NR: AP70031   (A)   SOURCE CODE: UR/0133/67/000/001/0053/0057

AUTHOR: Brovman, M.Ya.; Skorkin, N.V.; Shumkov, V.D.; Vydrin, V.K.; Dodin, Yu.S.; Makarov, V.G.; Rimen, V.Kh.; Lind, I.K.

ORG: Yuzhuralmashzavod; Chelyabinsk Polytechnic Institute (Chelyabinskiy politekhnicheskiy Institut); Chelyabinsk Metallurgical Plant (Chelyabinskiy metallurgicheskiy zavod)

TITLE: Investigation of a new 900/700/500 continuous blooming mill

SOURCE: Stal', no. 1, 1967, 53-57

TOPIC TAGS: metal rolling, hot rolling, rolling mill, continuous rolling mill/900-700-500 mill ROLLING

ABSTRACT:

The new 900/700/500 continuous blooming mill, designed and built at the Yuzhno-Ural'skiy Machine Building Plant, is in operation at the Chelyabinsk and Krivorozhskiy Metallurgical Plants. The new mill is designed for rolling square blooms with a cross section of 80 x 80—170 x 170 mm and flat slabs from 370 x 370 mm carbon and alloy steel blooms weighing up to 9 tons. Provision is also made for rolling round bars 105, 120, 140, 150, 170 and 220 mm in diameter. The mill is designed to produce 5.5 million tons of rolled stock per year; the metal delivery rate at the last stand

Card 1/2

UDC: 621.771.26

ACC NR: AP7003872

is 7 m/sec and the specific efficiency per ton of the equipment is said to be 25% higher than that of the most efficient existing blooming mills. The new mill consists of 14 stands. The first group consists of two separate 900 horizontal stands and a continuous set of six stands (two of them with vertical rolls). The second group of stands consists of three vertical and three horizontal stands. A planetary flying shears, made at the Staro-Kramatorskiy Plant, is used for cutting billets to size. Rolling large billets, 150 x 150 mm and up, is done in the first group of stands; the billets are shifted to a side roll gang and cut to length with 1000-ton shears. The stands have an individual electric d-c motor drive with continuous automatic power regulation. For further automation and higher precision of the rolling process, provision is made for installing magneto-elastic sensors of the metal pressure on the rolls. Experience showed that for continuous safe operation the billet surface temperature should not be lower than 1000C. The design of the stands and the technology used ensure the necessary accuracy for rolling commerical stock. Orig. art.. has: 6 figures and 3 tables.

[MS]

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 006/ ATD PRESS: 5115

Card 2/2

SOV/137-58-9-18962

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 115 (USSR)

AUTHORS: Brovman, M.Ya., Shpigel'man, R.M.

TITLE: The Turning of Metal in Rolling on Continuous Billet Mills
            (Kantovka metalla pri prokatke na nepreryvno-zagotovochnykh
            stanakh)

PERIODICAL: V sb.: Prokatn. i trubn. proiz-vo. Moscow, Metallurgizdat,
             1958, pp 137-146

ABSTRACT: One of the special features of the rolling of steel on contin-
uous billet mills with horizontal rolls is the need for turning
after each stand. Here, the turning process is continuous and
is performed by means of helicoidal or roller guides. An at-
tempt is made to provide a theoretical analysis of the turning
process from the viewpoint of permissible angles of twist (AT)
of the metal, and the added expenditure of energy thereon. An
equation is adduced determining the relation of the ultimate AT
upon the shape and dimensions of the billet, and also upon the
mechanical properties of the material. It is observed that the
presence of tangential stresses at the surface of the billet re-
duces the ultimate AT. It is established that turning in

Card 1/2

The Turning of Metal in Rolling on Continuous Billet Mills

SOV/137-58-9-18962

helicoidal guides increases the energy requirement for rolling by 14-20%, and this is confirmed by the practical experience of the operation of the mills of the Magnitogorsk Kombinat. The energy consumption is considerably lower when roller guides are employed. Thus, if the neck mountings of the turning rollers are placed in textolite bearings, the additional energy required for turning is 1.2-1.7%, whereas it is 0.4-0.6% if the rollers are mounted in roller bearings.

1. Rolling mills--Performance   2. Rolling mills--Equipment   3. Materials---Control

B.Ts.

Card 2/2

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 113 (USSR)

SOV/137-58-9-18952

AUTHOR: Brovman, M.Ya.

TITLE: The Elastic Deformation of Rolls in Cold Rolling (Uprugaya deformatsiya valkov pri kholodnoy prokatke)

PERIODICAL: V sb.: Prokatn. i trubn. proiz-vo. Moscow, Metallurgizdat, 1958, pp 168-175

ABSTRACT: The elastic deformation of rolls in cold rolling distorts and increases the length of the contact arc. Flattening of the rolls increases the specific pressure of the metal in the contact zone. Flattening of the rolls and increase in the length of the contact arc occurs chiefly past the axis of the rolls. A formula is derived for calculation of roll pressure. A method is advanced for the determination and an example is given of the calculation of the pressure between the metal and the rolls and the increase in the length of the contact angle past the axis of the rolls.

Card 1/1

1. Rolling mills--Equipment   2. Rolling mills--Pressure   B.Ts.
distribution   3. Rolling mills--Mathematical analysis   4. Structures
--Deformation

B Rovman, M.Ya.

133-58-3-13/29

AUTHORS: Brovman, M.Ya. and Shpigel'man, R.M., Engineers

TITLE: The Dependence of Metal Pressure on Rolls on the Velocity
           of Deformation (Zavisimost' davleniya metalla na valki
           ot skorosti deformatsii)

PERIODICAL: Stal', 1958, Nr 3, pp 230-235 (USSR)

ABSTRACT: A method of calculating the pressure of metal on rolls
           during hot rolling in which the influence of the rolling
           velocity and changes in the yield stress along the arc of grip
           are taken into consideration is proposed (Formulae 53, 54).
           The comparison of the results obtained using Tselikov's,
           Ekelund's and the author's formulae is shown in the table.   It
           is concluded that: 1) under the influence of the velocity
           of deformation, the pressure of metal on rolls increases
           considerably; 2) the use of the proposed method of calculation
           for alloy steels is difficult due to lack of experimental data
           on the influence of velocity of deformation on the yield stress.
           In the majority of existing formulae, the influence of the
           velocity of deformation is taken into consideration only
           approximately, assuming the constancy of the yield stress along
           the arc or grip. With increasing rolling velocity and
           widening of the production of alloy steels, the influence of
           the velocity of deformation becomes more important.
     Card1/2

The Dependence of Metal Pressure on Rolls on the Velocity of Deformation

133-58-3-13/29

There are 5 figures, 1 table and 4 Soviet references.

ASSOCIATION: Yuzhno-Uralskiy mashinostroitel'nyy zavod (South - Ural Machine Building Works)

AVAILABLE: Library of Congress

Card 2/2

SOV/179-59-1-18/36

AUTHORS: Brovman, M. Ya. and Mel'nikov, A. F. (Orsk)

TITLE: Experimental Investigation of Stresses on Impressing a Punch
in a Plastic Body (Eksperimental'noye issledovaniye usiliy
pri vdavlivanii shtampa v plasticheskoye telo)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh
nauk, Mekhanika i mashinostroyeniye, 1959, Nr 1, p 127 (USSR)

ABSTRACT: The formula

$$p = 2.97 \, \sigma_s \qquad (1)$$

has been proposed (Refs.1 and 2) for the stress in a plastic
half-plane under the action of a plane punch, where σ_s is
the flow limit. The flow limit and the tensile strength of
a specimen of lead were determined, and the stress developed
during punching of the lead measured for punches of dimensions
varying from 5 x 5 to 5 x 50 mm. It is found that provided
the ratio of length to width of the punch is greater than 10,
the maximum stress is given by:

$$p \approx 3 \, \sigma_B$$

where σ_B is tensile strength, instead of by Eq.(1).

Card 1/2

Experimental Investigation of Stresses on Impressing a Punch in a
Plastic Body   SOV/179-59-1-18/36

    Experiments on hot steel gave analogous results. There are
    1 figure, 1 table and 3 Soviet references.

ASSOCIATION: Yuzhno-Ural'skiy mashinostroitel'nyy zavod (South --
    Ural Machine Works)

SUBMITTED: April 30, 1958.

Card 2/2

BROVMAN, M.Ya. (Orsk); MEL'NIKOV, A.F. (Orsk)

Experimental investigation of stresses caused by the pressing-
in of a punch into a plastic body. Izv.AN SSSR.Otd.tekh.nauk.
Mekh. i mashinostr. no.2:127 Ja-F '59..   (MIRA 12:5)

1. Yuzhno-Ural'skiy mashinostroitel'nyy zavod.
              (Strains and stresses)

25(2)

AUTHOR: Brovman, M.Ya., Engineer

TITLE: Rivets of a New Design (Zaklepki novoy konstruktsii)

PERIODICAL: Mashinostroitel', 1959, Nr 3, p 34   (USSR)

ABSTRACT: The described rivets were tested in the experimental
laboratory of the Yuzhno-Ural'skiy mashinostroitel'nyy
zavod (Yuzhno-Ural'skiy   Machine Building Plant). The
essence of the new design is that the rivet is made
with a head on one end, two cross grooves on the
other end dividing this end into four sectors, and
an axial hole. A pin driven into the hole with a
sledge hammer spreads the four sectors apart and
secures the rivet firmly. The new rivets are suit-
able for fastening metal with metal or metal with
wood. They are applicable in spots otherwise in-
accessible to riveting. The mechanical strength of
the joints is the same as with conventional rivets.
There are 3 sets of diagrams and 1 table.

Card 1/1

AUTHOR: Brovman, M. Ya.

SOV/133-59-9-20/31

TITLE: The Influence of External Zones on the Resistance to Deformation in Roll Passes During Rolling

PERIODICAL: Stal', 1959, Nr 9, p 829 (USSR)

ABSTRACT: It was shown by A.I.Tselikov and V.V.Smirnov (Stal', 1958, Nr 9) that on rolling at a low ratio of the length of arc of grip to the mean thickness of a rolled specimen (l/h) the largest influence on the resistance to deformation is exerted by external zones. It was then proposed to account for the influence of external zones using a coefficient n_{σ}'' which was determined experimentally but only for flat specimens. The present author made similar determinations for square, diamond and round specimens. The results obtained are shown in Fig 2, as curves representing the dependence of n_{σ}'' on l/h. There are 2 figures.

ASSOCIATION:Yuzhuralmashzavod (South Ural Machine-Building Works)

Card 1/1

BROVMAN, M.Ya., inzh.; MEL'NIKOV, A.F., inzh.; SURIN, Ye.V., inzh.

New types of metal-cutting tools. Mashinostroitel' no.12:
19-20 D '59.   (MIRA 13:3)
        (Metal-cutting tools)

S/122/60/000/009/005/015
A161/A026

AUTHOR: Brovman, M.Ya., Engineer

TITLE: Calculation of Forces in the Gear Rolling Process

PERIODICAL: Vestnik mashinostroyeniya, 1960, No. 9, pp. 36 - 38

TEXT: Rolling is being used ever more extensively for making gears, but no calculation method has been developed yet for calculating the forces in this process; in a previous work (Ref. 1) the direction of forces had been studied and a method developed for calculating the contact area, but not the pressure in contact. The author suggests a method for determining the pressure. Metal flow in contact between the gear blank and the gear roll is analysed and calculation formulae derived for determining the pressure in different contact points at a given mutual position of blank and roll. Usually, the pressures of the roll tooth work on about 85% of the entire contact area; therefore, in case practical calculations need not be very accurate, it is not necessary to construct the successive positions of blank and roll tooth; the mean pressure may simply be determined by the formula $p_{mean} = 8.55 k$ (where k is the yield point in shear). This does not apply to alloy steel, particularly in the presence of carbides,

Card 1/2

Calculation of Forces in the Gear Rolling Process   S/122/60/000/009/005/015
                                                           A161/A026

and it is recommended to use empirical k values in this case. It is supposed
that deformation speed and local cooling of the blank have some effect, but they
are difficult to calculate. There are 3 figures and 2 Soviet references.

Card 2/2

S/182/60/000/012/0C2/010
A161/A030

AUTHORS: Brovman, M.Ya., and Genzelev, S.M.

TITLE: Forces Acting at Metal Deformation in Passes

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, 1960, No.12, pp. 5-9

TEXT: Forces acting on metal rolled in box and diamond passes (Fig.1)
are mathematically analized using the Ross theory (Ref.4, E.W. Ross, Journal
of Applied Mechanics, Sept., 1957, No.3) and the results of experiments in
the experiment laboratory of Yuzno-Ural'skiy mashinostroitel'nyy zavod
(South-Ural Machine Building Plant) with lead specimens. The results
matched the Ross theory. Slip lines observed in deformation in diamond
passes are shown (Fig.5). A graph (Fig.3) and formulae (8, 12, 13 and 14)
are derived for simple determination of deformation forces acting in
passes:

Card 1/7

Forces Acting at Metal Deformation in Passes

$$u = - \frac{u_0}{a} x;$$

$$v = - \frac{u_0}{a} y;$$

$$w = c_1 - \frac{6u_0}{m\sqrt{3}} \sqrt{1 - \frac{m^2}{a^2} (x^2 + y^2)};$$

$$\sigma_x = - c - \frac{2mk}{a} z;$$

$$\sigma_y = - c - \frac{2mk}{a} z;$$

(8)

$$\sigma_z = - c - \frac{2mk}{a} z + k\sqrt{3} \sqrt{1 - \frac{m^2}{a^2} (x^2 + y^2)}$$

Card 2/7

Forces Acting at Metal Deformation in Passes

where u, .v and w are flow speed components; a, u_0, y, x - designations used by R.Hill (Rof.1, Matomaticheskaya teoriya plastichnosti, Gostekhizdat, 1956) and shown in Figure 9; $_x$, $_y$, are the stress components; k - the yield limit; C- a constant;

$$P_{cp} = \frac{P}{4\sqrt{2}\,al} = C + \frac{mkl}{a} \qquad (12)$$

where p_{cp} is the mean deformation force

$$\frac{P_{cp}}{2k} = 0.707 + 0.353 \frac{L}{h}\,; \qquad (13)$$

and, for the case of being squeezed out from a square or diamond pass so that the point A (Fig.11) moves down with a speed u_0, and the point B to the right with a speed $\frac{u_0}{a}$ ab:

Card 3/7

Forces Acting at Metal Deformation in Passes

$$u = \frac{u_0}{a}\,\alpha x;$$

$$w = -\frac{u_0}{a}\,y;$$

$$w = C_1 + \frac{u_0}{a}\,(1-\alpha)\,z + \frac{2u_0}{m}\sqrt{1-\alpha+\alpha^2}\sqrt{1-\frac{m^2}{a^2}\,y^2}\;; \qquad (14)$$

$$\tau_{xy} = \tau_{xz} = 0;$$

$$\tau_{yz} = \frac{mk}{a}\,y;$$

$$\frac{\sigma_x}{k} = -C - \frac{mz}{a} + \frac{1+\alpha}{\sqrt{1-\alpha+\alpha^2}}\sqrt{1-\frac{m^2}{a^2}\,y^2}\;;$$

$$\frac{\sigma_y}{k} = -C\,\frac{mz}{a}\;; \qquad \frac{\sigma_z}{k} = -C - \frac{mz}{a} + \frac{2-\alpha}{\sqrt{1-\alpha+\alpha^2}}\sqrt{1-\frac{m^2}{a^2}\,y^2}$$

Card 4/7

Forces Acting at Metal Deformation in Passes   S/182/60/000/012/002/010
                                                       A161/A030

The formulae can be used for the calculation of widening deformation and
the solution is nearer to reality than the solution by R.Hill ["Khill" in
Russian transliteration (Ref.1)]. The (Ref.2), Russian, V.Prager and F.
Khodzg is published in "Izd. inostrannoy literatury" ("Publ. of Foreign
Literature"), 1956. There are 11 figures and 4 references: 3 Soviet and
1 English.
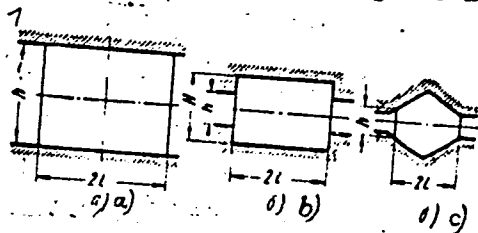
Fig. 1 - Deformation, a- between parallel plates; b- in a box pass;
c - in a diamond pass.

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Forces Acting at Metal Deformation in Passes
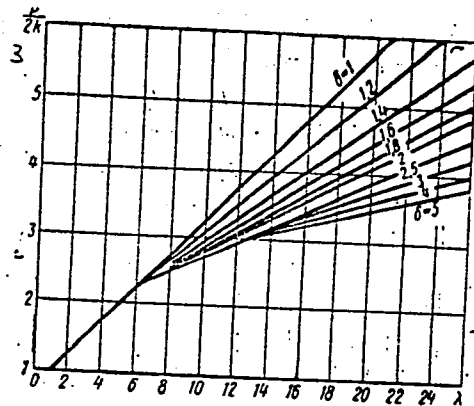
Fig. 3 - Dependance of $\frac{P}{2k}$ on λ. ($\lambda = \frac{1}{h}$)
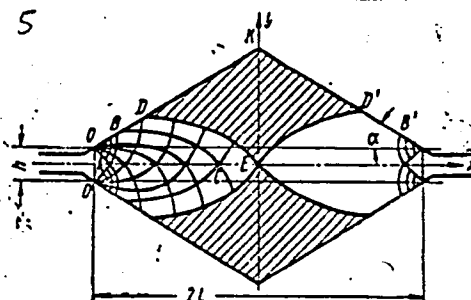
Card 6/7

Fig. 5 - Slip lines at compression of plastic mass when $\frac{1}{h} > (\frac{1}{h})_o$

Forces Acting at Metal Deformation in Passes   S/182/60/000/012/002/010
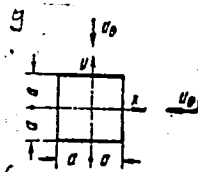   A161/A030
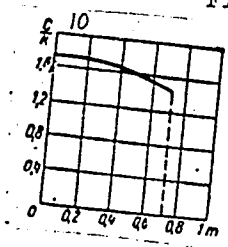
Fig. 9 - Square bushing [R.Hill (Ref.1)]

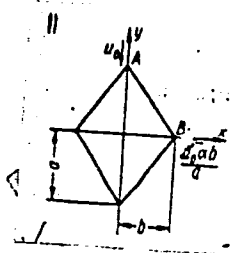Fig. 10 - Dependence $C = f(m)$. (C - the constant in the formulae)

Fig.11 - Diamond bushing.

Card 7/7

DOBROSKOK, I.I., inzh.; BROVMAN, M.Ya., inzh.; KUR'YANOV, L.P., inzh.;
SURIN, Ye.V., inzh.

Design of lightweight steel-pouring ladles. Stal' 20 no.9:806-807
S '60.

(MIRA 13:9)

1. Yuzho-Ural'skiy mashinostroitel'nyy zavod.
   (Open-hearth furnaces—Equipment and supplies)

AUTHORS: Brovman, M. Ya., Dodin, Yu. S.

TITLE: Determination of stresses in continuous mills

TEXT: The stresses between the stands have a considerable effect upon the forces and moments of the rolling and the forces on the rolls, which affects the operation of the individual elements of the mill. Formulae are derived for determining the stresses and the changes in roll forces related to them, and also formulae for correcting the number of revolutions with the aim of eliminating the stresses. A relation was established between the stretches and the roll speeds at which the stresses will be absent. The formulae can be applied, for example, to calculate a slabbing mill (1st stand horizontal, 2nd stand vertical). A numerical example is given for calculating the stresses between the 2nd, 3rd, and 4th stands of a continuous billet mill 850/700/500. The results obtained coincided closely with those found experimentally. The method is applicable to any number of stands. There are 6 references.

[Abstracter's note: Complete translation]   Ye. Bukhman

Card 1/1

BROVMAN, M.Ya.; MEL'NIKOV, A.F.

New design of a friction clutch. Mashinostroitel' no. 2:24-25
F '61.
        (Cluthes (Machinery))
                                            (MIRA 14:2)

S/117/61/000/003/011/011
A004/A101

AUTHORS: Brovman, M. Ya., Mikhaylov, G. M.

TITLE: Wire bearings

PERIODICAL: Mashinostroitel', no. 3, 1961, 36

TEXT: In mechanical engineering antifriction bearings with racers of high-alloyed steel being in short supply are widely used. In large-size antifriction bearings of machines and assemblies with relatively small loads at low rotation speeds, bearings of a more simple design can be used. In such bearings the anti-friction tracks for the balls are made of high-strength cold-drawn wire, in roller bearings they are made of high-strength steel strip. If necessary, the bearing can be assembled without racer. In such a case grooves are cut in the shaft and bearing housing and wire racers are fitted, which, together with the shaft and housing, act as bearings. Bearings with wire tracks were tested at the experimental laboratory of the Yuzhuralmashzavod Plant. It was found that wire tracks should be used whose diameter is 4 - 5 times less than the ball diameter. According to test data, the coefficient of friction of such bearings varies in the range of 0.005 - 0.009. Angle α is selected within 30 - 60°. The repair of

Card 1/2

Wire bearings

S/117/61/000/003/011/011
A/004/A101

wire bearings consists in replacing the worn tracks. There are 3 figures. [Ab-
stractor's note: Essentially complete translation]

Card 2/2

BROVMAN, M.Ya. (Orsk); GENZELEV, S.M (Orsk)

Determining stresses caused by deformations in rhombic grooves. Izv.
AN SSSR Otd.tekh.nauk.Mekh.i mashinostr. no.3:169-171 My-Je '61.
(MIRA 14:6)
(Deformations (Mechanics))

BROVMAN, M.Ya.; MEL'NIKOV, A.F.

Determination of force and energy for the marking process. Kuz.-
shtam. proizv. 3 no.11:43-44 N '61. (MIRA 14:11)
(Forging machinery--Attachments)