RIDANOVIC, Josip, asistent (Zagreb, Marulicev trg 19)

"Geoloski glasnik", vol. 1, 1956. Reviewed by Josip Ridanovic.
Geogr glas no.21:144-145 '60.

1. Geografski odsjek Prirodoslovno-matematickog fakulteta Sveucilista u Zagrebu.

(Geology) (Yugoslav periodicals)

RIDANOVIC, S.

Levomepromazin (nozinan, 7044 R. P.) in the treatment of mental disorders. Neuropsihijatrija 9 no.1:63-76 '61.

1. Iz "Hopital Psychiatrique de Bonneval", Francuska (Direktor: dr. H. Ey).

(TRANQUILIZING AGENTS ther) (MENTAL DISORDERS ther)

LIKHAREV, I. M.; RIDEL', A.

New terrestrial mollusk of the genus Oxychillus Fitz. (Gastropoda, Zonitidae) from Transcaucasia. Trudy Zool. inst. 30:14-16 '62. (MIRA 15:10)

(Zakataly Preserve—Zonitidae)

RIDEL', Adol'f

Further materials on the study of Zonitdae (Gastropoda) of Soviet Armenia and adjacent countries. Zool.sbor. 11: 191-206 '59. (MIRA 13:8)
(Caucasus--Gastropoda)
(Transcaucasia--Gastropoda)

RIDEL', E.I., kand. tekhn. nauk; SVIRIDOV, V.A., inzh.; SHCHEPETIL'NIKOV, V.A., doktor tekhn. nauk

Automatic hook designed at the Moscow Institute of Railroad Engineers. Mekh. i avtom. proizv. 19 no.8:29 Ag '65. (MIRA 18:9)

SHADUR, L.A., prof., doktor tekhn.nauk; LUKIN, V.V., dotsent, kand.tekhn.nauk; RIDEL', E.I., dotsent, kand.tekhn.nauk; ZAMURUYEV, V.T.

Capacity and design of boxcars. Zhel.dor.transp. 47 no.12:30-32 D '65. (MIRA 18:12)

1. Glavnyy konstruktor Altayskogo vagonostroitel'nogo zavoda (for Zamuruyev).

KLOCHKOV, Vladimir Ivanovich; ERMAN, Abram Solomonovich; RIDEL', E.I., red.; USENKO, L.A., tekhn.red.

[Advanced work methods in mechanized operations; work practices of the Kiev-Tovarnyi, Kiev-Petrovka and Nakhichevan'-Don Stations] Peredovye metody truda mekhanizatorov; opyt raboty stantsii Kiev-Tovarnyi, Kiev-Petrovka i Nakhichevan'-Don. Moskva, Vses. izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. (MIRA 14:1)
62 p.
(Railroads--Freight) (Loading and unloading)

SHTEFKO, I.V., kand.tekhn.nauk; RIDEL', E.I., kand.tekhn.nauk

New type of pallets for haulage of factory-packed freight. Zhel. dor.transp. 42 no.6:70-72 Je '60. (MIRA 13:7)
(Freight handling)

KUZNETSOVA, T.P.; RIDEL', E.I., redaktor; KANDYKIN, A.Ye., tekhnicheskiy redaktor

[Closer loading of railroad cars with crated goods] Uplotnennaia zagruzka vagonov tarno-upakovochnymi gruzami. Moskva, Gos. transzheldorizdat, 1952. 24 p. [Microfilm] (MLRA 7:10)
(Railroads--Freight)

SHTEFKO, I.V.; RIDEL', E.I.; YEFIMOV, G.P., kand. tekhn. nauk, retsenzent; SHISHKIN, G.S., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Over-all mechanization of the loading and unloading of fruit and vegetables] Kompleksnaia mekhanizatsii pogruzki-vygruzki plodoovoshchei. Moskva, Transzheldorizdat, 1963. 58 p. (MIRA 16:7)
(Loading and unloading) (Fruit--Transportation)
(Vegetables--Transportation)

KIDEL', E.I.; SHTEFKO, I.V.; POMYKANOV, N.N., inzh., retsenzent; TSARENKO, A.P., inzh., red.; SALYANSKIY, A.A., red.izd-va; TIKHANOV, A.Ya., tekhn. red.

[Over-all mechanization and automation of loading and unloading operations with packaged piece goods] Kompleksnaia mekhanizatsiia i avtomatizatsiia pogruzochno-razgruzochnykh rabot s tarno-shtuchnymi gruzami. Moskva, Mashgiz, 1963. (MIRA 16:12)
205 p.
(Loading and unloading--Equipment and supplies)
(Automation)

MITIN, A.V., inzhener; MERKZHKO, V.G., inzhener; RIDEL', M.I., kandidat tekhnicheskikh nauk, redaktor; KHITROV, P.A., tekhnicheskiy redaktor

[Manual for machinists operating railroad freight-lifting cranes] Rukovodstvo mashinistu gruzopod"emnogo krana na zheleznodorozhnom khodu. Izd. 2-e, dop. Moskva, Gos.transp. zhel-dor. izd-vo, 1955. 234 p. (MLRA 9:3)

(Cranes, derricks, etc.)

GRINEVICH, Georgiy Petrovich, professor, doktor tekhnicheskikh nauk; RIDEL', E.I., kandidat tekhnicheskikh nauk, redaktor; SHAVKIN, G.B., inzhener, redaktor; YUDZON, D.M., tekhnicheskiy redaktor

[Mechanizing loading, unloading and storage work in railroad transportation] Mekhanizatsiia pogruzochno-razgruzochnykh rabot i sklady na zheleznodorozhnom transporte. Izd.3-e, Ispr. i dop. Moskva, Gos.transp.zhel-dor.izd-vo, 1955. 467 p. (MLRA 9:3)

(Railroads--Freight) (Conveying machinery)

RIDDER, Ernest, J.

Author(s) Ridder, Hubert and Ridder, Ernest J. No.

Title An Evaluation of Magnesium In Germany During World War II (Part IV.)

Publication Modern Metals Vols.

No. Date June 48 Pages 25-27 No. refs.

Abstract

This part treats with aluminum-magnesium alloys and their applications.

Hy 51 5% Mg, 1% Si + Mn (cast cylinder heads)

Hy 71 7% Mg, 1% Si + 0.2% Ti

Hy 35 3.5% Mg, low Mn, 0.8% Si

KIDEAL, E.K.,
JOHNSON, P., Biochem. et Biophys. Acta 5, 376-96 (1950)

RIDEL', ADOL'F

Materials on a study of the zonities(Gastropoda) of Soviet Armenia. Zool. sbor. no. 10:185-208 '57. (MIRA 11:7)
(Armenia--Snails)

RIDEL', E. A.

AID P - 2506

Subject : USSR/Meteorology

Card 1/1 Pub. 71-a - 16/26

Author : Ridel', E. A., and Shubtsova, V. G.

Title : On computing radiation balance using the thermoelectric measuring device of Yanishevskiy

Periodical : Met. i Gidro., 3, 49-50, My-Je 1955

Abstract : Number 5 of the Directives to Hydrometeorological Stations mentions that both strips of the "balancemeter" of Yanishevskiy are equally sensitive. The author of the article criticizes this statement and gives a mathematical analysis of the measuring of both surfaces. One Russian reference, 1937.

Institution: None

Submitted : No date

RIDEL, E. A.

7.8-68

Ridel', E. A. and Shubtsova, V. G., O vychislenii radiatsionnogo balansa po izmereniiam termoelektricheskim balansomerom Ianishevskogo. [Calculation of the radiation balance from measurements of the thermoelectric balance meter of Ianishevskii.] *Meteorologiia i Gidrologiia*, Moscow, No. 3:49–50, May/June 1955. ref., 6 eqs. DWB—The receiving surfaces of the Ianishevskii thermoelectric balance meter may differ in sensitivity. Equations are developed for calculating radiation balance in cases of repeated measurement. *Subject Heading:* 1. Radiation balance calculations.—*I.L.D.*

551.508.25:551.501.4

2/3

MALAKHOV, Konstantin Nikolayevich; KOROTKOV, Valentin Nikolayevich; L'VITSYN, Nikolay Fedorovich; RIDEL', E.I., kand.tekhn.nauk, red.; KHITROV, P.A., tekhn.red.

[Equipment used in freight handling] Tekhnika gruzovogo khoziaistva. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 166 p.

(MIRA 14:1)

(Railroads--Freight)

SHTEFKO, I.V., kand.tekhn.nauk, RIDEL', E.I., kand.tekhn.nauk

Innovations in the over-all mechanization of loading and unloading piece freight. Mekh.i avtom.proizv. 14 no.8:34-36 Ag '60.
(MIRA 13:8)
(Loading and unloading--Technological innovations)

RIDEL', E.I., dots., kand. tekhn. nauk; SVIRIDOV, V.A., inzh.

Design manufacture and testing of containers for combined rail and truck transport of brick and other similar building materials. Trudy MIIT no.86:379-424 '57. (MIRA 11:1)
(Containers) (Brick--Transportation)

SHTEFKO, I.V., kand.tekhn.nauk; RIDEL', E.I., kand.tekhn.nauk.

Organizing freight handling using crates on trays. Zhel. dor. transp. 40 no.1:71-75 Ja '58. (MIRA 11:1)
(Railroads--Freight)

RIDEL', E.I., kandidat tekhnicheskikh nauk; SHTEFKO, I.V., kandidat tekhnicheskikh nauk.

Pallets for handling piece freight. Mekh.trud.rab. 11 no.3:42-45 Mr '57. (MLRA 10:5)
(Loading and unloading)
(Freight and freightage)

RIDEL' K.I.

KOROTKOV, Valentin Nikolayevich; RIDEL', K.I., redaktor; VERINA, G.P., tekhnicheskiy redaktor

[Manual for operators of gantry cranes] Rukovodstvo kranovshchiku kozlovogo krana. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 307 p. (Cranes, derricks, etc.) (MLRA 10:9)

RIDEL', E. I.

MUZHICHKOV, Vasiliy Ivanovich, inzhener; REDNIKOV, Vsevolod Anatol'yevich, inzhener; RIDEL', E.I., kandidat tekhnicheskikh nauk, redaktor; VERINA, G.P., tekhnicheskiy redaktor

[Hoisting cranes for railroad operations (construction, operation and repair)] Gruzopod"emnye krany na zheleznodorozhnom khodu (ustroistvo, ekspluatatsiia i remont). Moskva, Gos.transp.zhel-dor. izd-vo, 1957. 463 p. (MLRA 10:9)
(Cranes, derricks, etc.)

RIDEL', E.I.

RIDEL', E.I., kandidat tekhnicheskikh nauk; SHTEFKO, I.V., kandidat tekhnicheskikh nauk.

Mechanized handling of crated and packaged freight. Zel.dor. transp. 39 no.4:83-85 Ap '57. (MLRA 10:5)
(Europe, Western--Loading and unloading)

POTAPOV,V.P.;BARKAN,I.N.; DEM'YANKOV,N.V.; KANSHIN,M.D.; L'VITSYN,N.F.; MASTERITSYN,N.N.; NOZDRIN,A.A.; PADNYA,V.A.; RIDEL',E.I.; FERAPONTOV,G.V.; SHAMAYEV,M.F.; SHATSKAYA,E.P.; SHAVKIN,G.B., inzhener, redaktor; KHITROV,P.A., tekhnicheskiy redaktor

[Advanced methods in shipment and commercial handling of goods] Peredovye metody truda gruzovykh i kommercheskikh rabotnikov, Izd. 2-oe. Moskva, Gos.transp.zhel-dor. izd-vo, 1955. 286 p. (MLRA 9:2)

(Material handling) (Transportation--Equipment and supplies)

RIDEL', Eduard Ivanovich; SHTEFKO, Igor' Vladimirovich; YEFIMOV, G.P., retsenzent; TSARENKO, A.P., red.; MEDVEDEVA, M.A., tekhn. red.

[Transportation of palletized loads] Opyt perevozok gruzov v iashchichnykh poddonakh. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 47 p. (MIRA 14:7)
(Unitized cargo system)

RIDEL', Eduard Ivanovich; PANOV, V.I., inzhener, redaktor; YUDZON, D.M., tekhnicheskiy redaktor.

[Mechanizing the shifting of loads in closed storerooms with the aid of fork lift trucks; work practice of the Kiev and Odessa freight stations, and Moscow freight station in Leningrad] Mekhanizatsiia pererabotki gruzov v zakrytykh skladakh elektropogruzchikami; opyt stantsii Leningrad-tovarnyi Moskovskii, Kiev-tovarnyi, Odessa-tovarnaia. Moskva, Gos.transp.zhel-dor.izd-vo, 1956. 98 p. (Fork lift trucks) (Railroads--Freight) (MLRA 9:6)

GULEV, Ya.F.; RIDEL', E.I., red.; BULKIN, V.V., red.; KANDYKIN, A.Ye., tekhn.red.

[Standard technological operations at railroad stations and sidings; practices of the Anzherskaya coal-loading station] Edinaia tekhnologiia stantsii i pod"ezdnykh putei; opyt uglepogruzochnoi stantsii Anzherskaia. Moskva, Gos.transp. zhel-dor.izd-vo, 1950. 48 p. (MIRA 12:3)
(Anzhero-Sudzhensk--Railroads--Freight)
(Coal--Transportation)

POTAPOV, V.P., redaktor; KANSHIN, M.D.; LIVITSYN, N.F.; MASTERITSYN, N.N.; NOZDRIN, A.A.; NIKITYUK, A.P.; PADNYA, V.A.; RIDEL', E.I.; FERAPONTOV, G.V.; SHAMAYEV, M.F.; SHATSKAYA, E.P.; GULEV, Ya.F., redaktor; VERINA, G.P., tekhnicheskiy redaktor.

[Advanced methods for workers in material handling] Peredovye metody truda kommercheskikh rabotnikov. Moskva, Gos. transp. zhel-dor. izd-vo, 1953. 262 p. [Microfilm] (MLRA 7:11)

(Material handling)

RIDEL', Eduard Ivanovich; SHTEFKO, Igor' Vladimirovich; GRISHCHENKOV, A.S., inzh., red.; VERINA, G.P., tekhn.red.

[Transportation of packaged piece freight by packs] Perevozka tarno-shtuchnykh gruzov paketami. Moskva, Gos.transp.zhel-dor. izd-vo, 1959. 105 p.
(Shipment of goods) (MIRA 12:8)

GOLUBKOV, Vladimir Vladimirovich; KULAGIN, Viktor Markelovich; NESTERENKO, Mitrofan Akimovich; RIDEL', E.I., red.; KHITROV, P.A., tekhn.red.

[Loading and unloading at railroad stations] Pogruzochno-razgruzochnye raboty na zheleznodorozhnykh stantsiiakh. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 291 p. (MIRA 12:8)
(Railroads--Freight) (Loading and unloading)

BUZANOV, S.P., prof.; SHTEFKO, I.V., dots.; RIDEL', E.I., dots.; TAMAKHOVSKAYA, N.K., red.; MUKHA, S.Ya., tekhn. red.

[Transportation of container and piece goods on pallets in foreign countries] Perevozka tarno-shtuchnykh gruzov na poddonakh za rubezhom. Moskva, Vses.in-t nauchn. i tekhn.informatsii, 1960. 79 p. (MIRA 15:1)

(Unitized cargo system) (Railroads--Freight)

GORSHKOV, V.G.; FIDEL', K.

Effect of screening in pair conversion. Zhur. eksp. i teor. fiz. 45 no.5:1603-1605 N '63. (MIRA 17:1)

1. Fiziko-tekhnicheskiy institut imeni A.F. Ioffe AN SSSR.

AUTHORS: Ridel', N. V., Gerchuk, M. P. 79-28-5-42/69

TITLE: On the Transamination Reactions of the Amides of Carboxylic Acids (O reaktsiyakh pereamidirovaniya amidov karbonovykh kislot)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol 28, Nr 5, pp 1306 - 1309, (USSR)

ABSTRACT: The investigation of the reversible reaction in the re-amidation of carboxylic acid amides taking place according to the equation:
$RCONHR' + R''NH_2 \rightleftarrows RCONHR'' + R'NH_2$ is based on the work of reference 1 in which it is shown that in the conversion of the substituted urea compounds with primary amines a regrouping of the amide groups takes place which leads to the formation of a new substituted urea and of a new amine:
$2\ N\ H_2\ R' + R''\ HNCO\ N\ H\ R'' \rightleftarrows 2NH_2R'' + R'HNCONHR'$.
The authors investigated 7 pairs of similar reactions. In the present work it was of interest to carry out the re-amidation of carboxylic acid amides. In this the following was found: In the conversion of acetamide with chlorine hydrates of aro-

Card 1/3

On the Transamination Reactions of the Amides of Carboxylic Acids

matic amines the corresponding acylamide and ammonia form. On heating the chlorine hydrates of primary aromatic amines with acylarylamides a new acylarylamide and a new aromatic amine result. Individual re-amidation reactions can be used in the industrial production of some amines. In the production of p-nitroaniline the authors recommend to saponify the p-nitroacetanilide with aniline and not, as has hitherto been done, with sulfuric acid. In this at the same time the final product p-nitroaniline and the initial product acetanilide are formed, which again serve in the production cycle for the production of p-nitroaniline. In the same way the p-acetylamino-benzenesulfamide had to be saponified with aniline in the production of sulfanilamide; this leads to the simultaneous formation of sulfanilamide and the initial substance, acetanilide There are 4 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy institut narodnogo khozyaystva (Moscow Institute for National Economy)

79-28-5-42/69

On the Transamination Reactions of the Amides of Carboxylic Acids

ASSOCIATION: Moskovskiy institut narodnogo khozyaystva (Moscow Institute of National Economy)

SUBMITTED: December 12, 1957

Card 3/3

Ridel, N.V.

Distr: 4E4j

Exchange reactions of acid amides of carbonic acids. N. V. Ridel and M. P. Gerchuk. *Khim. Nauka i Prom.* 2, 665–6(1957); cf. *C.A.* 44, 9944d.—With HCl as a catalyst exchange reactions of the type $AcNH_2 + RNH_2 \rightleftharpoons AcNHR + NH_3$ proceed almost to completion. Thus $AcNH_2$ (I) reacted with $PhNH_2$ at 180–190° in 45 min., giving 75% AcNHPh. With hydrochlorides of *o*-toluidine or with *o*-aminodimethylaniline I reacted in the presence of HCl, giving satisfactory yields of the corresponding aryl amides. Reactions $AcNHR + R'NH_2 \rightleftharpoons AcNHR' + RNH_2$ are almost completely displaced to the right in 45 min. at 180–190° in the presence of HCl (cf. M. E. Smith, *et al.*, *C.A.* 32, 3331⁹). The com. process of prepn. of *p*-nitroaniline from *p*-nitroacetanilide and $PhNH_2$ is practical because the acetanilide formed during the reaction is returned to the cycle.

I. Beneowitz

RIBEL', N. V.

Cand Chem Sci - (diss) "Reactions of the re-amidation of amides of carboxylic acids." Moscow, 1961. 11 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Inst of Fine Chemical Technology imeni M. V. Lomonosov); 200 copies; price not given; (KL, 7-61 sup, 222)

RIDEL', Vol'demar Aleksandrovich; PETROVA, Ye.A., vedushchiy redaktor; MUKHINA, E.A., tekhnicheskiy redaktor

[Repairing screw joints of drilling pipes] Remont rez'bovykh soedinenii buril'nykh trub. Moskva, Gos.nauchno-tekhn.izd-vo neft.i gorno-toplivnoi lit-ry, 1957. 56 p. (MLRA 10:10)
(Oil well drilling)

RIDEL', Vol'demar Aleksandrovich; PETROVA, Ye.A., vedushchiy redaktor; MUKHINA, E.A., tekhnicheskiy redaktor

[Repair of threaded unions of casings] Remont rez'bovykh soedinenii buril'nykh trub. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1957. 56 p. (MLRA 10:10)
(Oil wells--Maintenance and repair)

RIDEL', N.V.; GERCHUK, M.P.

Reamidation reactions of carboxylic acid amides. Khim.nauka i prom. 2 no.5:665-666 '57. (MIRA 10:12)

1.Institut narodnogo khozyaystva im. G.V. Plekhanova.
(Amides)

RIDEL', Ye.A.; SHUBTSOVA, V.G.

Calculation of the radiation balance by measurements of the Ianishevskii thermoelectric balance gauge. Meteor.i gidrol. no.3:49-50 My-Je '55. (MLRA 8:9)
(Solar radiation)

RIDEL', Ye. A.

33-3-26/32

AUTHOR: Vyushkov, P.V. and Ridel', Ye.A.

TITLE: A bolometric pyrheliometer for absolute measurements of direct solar radiation. (O Bolometricheskom pirgeliometre dlya absolyutnykh izmereniy pryamoy solnechnoy radiatsii)

PERIODICAL: "Astronomicheskiy Zhurnal" (Journal of Astronomy), 1957, Vol.34, No.3, pp. 490-492 (U.S.S.R.)

ABSTRACT: A pyrheliometer based on the bolometric principle is described. Basically, it consists of an 0.05 mm thick copper ring having a receiving area of 0.5 to 1.0 cm^2, and a resistance of 10 Ω approx. The ring is blackened and absorbs approx. 98% of the incident radiation. The ring is included as one arm of a Wheatstone bridge, the other three arms being of known resistance. The ring is covered, balance is established in the bridge, and the current i_o through the bolometer is measured. The ring is then exposed to radiation and balance is re-established by adjusting a rheostat in series with the driving battery (the arms of the bridge remaining unaltered). If the current through the ring is now i_r then it can easily be shown that the intensity of solar radiation I is given by:

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A bolometric pyrheliometer for absolute measurements of direct solar radiation. (Cont.)

$$I = \frac{14.35r}{S\sigma}(i_T^2 - i_0^2)$$

where S is the exposed area and σ is the absorptivity. If $S\sigma$ is known, it is possible to determine I absolutely.

This pyrheliometer has several advantages over Angstrom's compensated pyrheliometer. In a series of experiments the latter instrument gave readings 1.4% lower (on the average) than the pyrheliometer now reported.

There are 2 figures and 4 Slavic references.

ASSOCIATION: Saratov State University im. N.G. Chernyshevskogo. (Saratovskiy Gos. Universitet im N.G.Chernyshevskogo)

SUBMITTED: December 3, 1956

AVAILABLE: Library of Congress

SOV/49-59-4-18/20

AUTHOR: Ridel', Ye. A.

TITLE: On the Coefficient of Variability in the Lowest Layer of the Atmosphere (O koeffitsiyente obmena v prizemnom sloye atmosfery)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 4, pp 632-634 (USSR)

ABSTRACT: The equation of turbulent energy in equilibrium for a uniform air layer near the surface can be expressed as Eq (2) for the conditions Eq (1), where $\partial u/\partial z$ and $\partial T/\partial z$ are vertical gradients of wind velocity and temperature respectively, K - coefficient of turbulent mixing, v_* - "dynamic velocity" , q - heat flow, ρ and C_p - density and heat conductivity of the air, T_o - mean temperature of the layer, g - gravity, α - turbulence number, D - dissipation of the turbulent energy. Taking the relationship of the length L , velocity v_* and temperature T_x as Eqs (3) and (4) (Ref 1), the expressions (5) and (6) can be derived. Thus, when Eq (6) is applied, the expressions (1) and (2) can be shown as Eq (7), from which the relationship of αRi to the height can be simplified when $\gamma = 1$. For the height

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On the Coefficient of Variability in the Lowest Layer of the Atmosphere

$\varkappa z \leqslant |L|$ the function αRi (Eq 7) can be expressed as Eq (8). However, since γ is not constant it can be substituted by the parameter ε (Ref 5) if the functions K and D in Eq (3) are taken as:

$$K \sim v_* \varkappa z \left(\frac{\varkappa z}{L}\right)^{-\varepsilon} , \qquad D \sim \frac{v_*^3}{\varkappa z} \left(\frac{\varkappa z}{L}\right)^{\delta} .$$

Card 2/3

SOV/49-59-4-18/20

On the Coefficient of Variability in the Lowest Layer of the Atmosphere

There are no figures. There are 5 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut mekhaniki i fiziki pri Saratovskom gosudarstvennom universitete (Scientific and Research Institute of Mechanics and Physics at Saratov State University)

SUBMITTED: February 10, 1958.

Card 3/3

MACHOWSKI, Jerzy; RIDELSKI, Ryszard; RUCKA, Aurelia

Pericardial mesothelioma. Polski tygod. lek. 11 no.43:1837-1841 22 Oct 56.

1. (Z Oddzialu Chorob Wewnetrznych Szpitala Wojskowego; Ordynator: dr. E. Kowalski; z Pracowni Anatomopatologicznej Szpitala Wojskowego: Kierownik: dr. med. R. Fidelski i z Zakladu Anatomii Patologicznej A.M. w Poznaniu; Kierownik: prof. dr. med. J. Groniowski) adres: Poznan, ul. Grottgera 15 m. 8.

(MESOTHELIOMA, case reports,
pericardium (Pol))
(PERICARDIUM, neoplasms,
mesothelioma, case (Pol))

RIDER, B.A.

Profitableness of plant pest and disease control. Zashch. rast. ot vred. i bol. 3 no.3:6-7 My-Je '58. (MIRA 11:6)

1. Nachal'nik otdela zashchity rasteniy Voronezhskogo oblastnogo upravleniya sel'skogo khozyaystva.
(Plant diseases) (Agricultural pests)

LAPSHIN, L., aspirant; LIPIN, V.; RIDER, V.; VORONOV, I.; BELEVANTSEV, I.; BUNIN, L.; MANDRYKA, A.

Experimental farm should serve as an example. Zashch. rast. ot vred. i bol. 10 no.12:19-21 '65. (MIRA 19:1)

1. Permskiy sel'skokhozyaystvennyy institut (for Lapshin). 2. Nachal'nik stantsii zashchity rasteniy, Perm' (for Lipin). 3. Nachal'nik Voronezhskoy oblastnoy stantsii zashchity rasteniy (for Rider). 4. Nachal'nik Petropavlovskogo otryada zashchity rasteniy, Voronezhskaya oblast' (for Voronov). 5. Direktor Pavlodarskoy stantsii zashchity rasteniy (for Bunin). 6. Glavnyy agronom kolkhoza imeni Kirova, Konotopskiy rayon, Sumskoy oblasti (for Mandryka).

ANIKEYEVA, N.M., agronom-fitopatolog (Voronezh); RIDER, V.A.

Practices in the extermination of smuts. Zashch. rast. ot vred. i bol. 6 no.7:18 Jl '61. (MIRA 16:5)

1. Glavnyy agronom po zashchite rasteniy Voronezhskogo oblastnogo sel'skokhozyaystvennogo upravleniya (for Rider).
(Voronezh Province--Smuts)

RIDEVSKIY, N.P.

Reorganization of sections feeding raw material to steaming pools and peeling shops. Der.prom. 9 no.6:22-23 Je '60. (MIRA 13:8)

1. Povolzhskiy fanernyy zavod.
(Veneer and veneering) (Assembly-line methods)

J

Country : CZECHOSLOVAKIA
Category : Soil Science. Biology of Soils.

Abs Jour : RZhBiol., No 6, 1959, No 24630

Author : Ridky, K.
Inst : Czechoslovakian Academy of Agriculture.
Title : The Role Played by Microbes in Plant Nutrition.

Orig Pub : Sbor. Ceskosl. akad. zemed. ved. Rostl. vyroba, 1956, 29, No. 9-10, 813-840

Abstract : Data on the quantity dynamics of different groups of microorganisms under the conditions of grassfield crop rotations in connection with their harvest are presented. It was demonstrated, in particular, that the number of microbs mineralizers of the oil organic substances under grass mixtures find themselves in reverse relation to the plant harvests on these fields; this is noted es-

Card : 1/2

Rider, P.

Rider, P. Certain moment functions for Fisher's K-statistics in samples from a finite population. Acta [Trudy] Univ. Asiae Mediae. Ser. V-a. Fasc. 30, 13 pp. (1939). (English. Russian summary)

Sample moments or, alternatively, Fisher's K-statistics, which are polynomials in the sample moments, vary from sample to sample and their higher moments as well as their means are of interest. Isserlis [Proc. Roy. Soc. London. Ser. A. 132, 586–604 (1931)] attacked the higher moments of the sample moments from a finite population. The resulting expressions are cumbersome. The author calculates the higher moments of Fisher's k-statistics of total weight not exceeding 6 [$K((k_1)^2 k_3)$ has weight 5]. He proceeds by equating coefficients in generating functions. Apparently without knowledge of the present paper, Irwin and Kendall [Ann. Eugenics 12, 138–142 (1944); these Rev. 6, 162] developed a method for this calculation and worked out the cases $K(k_r k_s)$ and all cases of weight not exceeding 4 except $K(k_2 k_4)$. *J. W. Tukey* (Princeton, N. J.).

Source: Mathematical Reviews, Vol 8 No. 8

RIDER, V.A. (Voronezh)

Attachments to planters for the placement of poisonous chemicals with fertilizers into soils. Zashch. rast. ot vred. i bol. 6 no.4:15-16 Ap '61. (MIRA 15:6)
(Spraying and dusting equipment)
(Wireworms)

RIDER, V.A.

Mechanization of cluster and strip placement of hexachloran in soils. Zashch.rast.ot vred. i bol. 5 no.2:13-14 F '60. (MIRA 15:12)

1. Glavnyy agronom po zashchite rasteniy Voronezhskogo oblastnogo sel'skokhozyaystvennogo upravleniya.
(Benzene hexachloride) (Voronezh Province—Wireworms)

RIDER, V.A.

First steps of the units of repair and supply stations. Zashch. rast. ot vred. i bol. 4 no.2:7-8 Mr-Ap '59. (MIRA 16:5)

1. Nachal'nik otdela zashchity rasteniy Voronezhskogo oblastnogo sel'skokhozyaystvennogo upravleniya.
(Voronezh Province—Plants, Protection of

RIDER, V.A.

Unnecessary method. Zashch. rast. ot vred. i bol. 8 no.5:15 My '63. (MIRA 16:9)

1. Nachal'nik Voronezhskoy stantsii zashchity rasteniy.
(Voronezh Province--Barley--Diseases and pests)
(Voronezh Province--Smuts)

SERGEYEV, N.; RIDER, V.A.; ORIPOV, Kh.; BRUNNER, Yu.N.; MANGUSH, Kh.; ORLOVA, A.S.; SHCHERBAKOVSKIY, N.N.; LESHCHINSKIY, N.S.; VOYAKOVSKAYA, Ye.S.; DERYABIN, V.I.

Letters to the editor. Zashch. rast. ot vred. i bol. 6 no.5:44-45 My '61. (MIRA 15:6)

1. Inspektor po karantinu rasteniy g.Labinsk, Krasnodarskogo kraya (for Sergeyev). 2. Zaveduyushchiy Primorskim gosudarstvennym sortoispytatel'skim uchastkom Stalinskoy oblasti (for Mangush). 3. Agronom po zashchite rasteniy Shchelkovskogo rayona, Moskovskoy obl. (for Orlova). 4. Zaveduyushchiy Aleksandrovskim nablyudatel'nym punktom, Kirovogradskaya obl. (for Shcherbakovskiy). 5. Inspektor po karantinu rasteniy, g. Pyatigorsk, Stavropol'skogo kraya (for Leshchinskiy). 6. Agronom po zashchite rasteniy g. Kamenets-Podol'skiy, Khmel'nitskoy oblasti (for Voyakovskaya).

(Plants, Protection of)

RIDER, V.A. (Voronezh)

Machine for the disinfection of seeds. Zashch.rast.ot vred. i bol. 4 no.1:22 Ja-F '59. (MIRA 12:2)
(Seeds--Disinfection)

RIDER, V.A.

Protecting grain crops. Zashch. rast. ot vred. i bol. 3 no.1:33-34 Ja-F '58. (MIRA 11:3)

1. Nachal'nik otdela zashchity rasteniy Oblastnogo upravleniya sel'skogo khozyaystva.
(Grain--Diseases and pests) (Eurygasters)

MANUKOVSKIY, N.F.,; Geroy Sotsialisticheskogo Truda; PETROV, V.P. starshiy inzhener; RIDER, V.A.

Important crew in over-all mechanization. Zashch. rast. ot vred. i bol. 5 no.1:5-7 Ja '60. (MIRA 14:6)

1. Brigadir kolkhoza imeni Kirova, Novo-Usmanskogo rayona, Voronezhskoy obl. (for Manukovskiy). 2. Starshiy inzh. oblsel'khozupravleniya, Voronezhskaya oblast' (for Petrov). 3. Glavnyy agronom po zashchite rasteniy oblsel'khozupravleniya, Voronezhskaya oblast' (for Rider).
(Plants, Protection of) (Farm mechanization)

RIDER, V. A.

Contribution of scientists to agriculture. Zashch. rast. ot vred. i bol. 6 no.6:27 Je '61. (MIRA 16:4)

(Voronezh Province—Plants, Protection of)

RIDER, V.A. (Voronezh)

Questions and answers. Zashch. rast. ot vred. i bol. 7 no.3:46 Mr 62. (MIRA 15:11)

(Plants, Protection of)

VIZEL'MAN, B.A., inzh.; RIDER, Ye.Ya.

Accelerated delivery of mineral fertilizers. Zhel. dor. transp. 46 no.4:74-77 Ap '64. (MIRA 17:6)

1. Nachal'nik gruzovogo otdela Moskovsko-Rizhskogo otdeleniya Moskovskoy dorogi (for Rider).

MARTYNENKO, D.I., inzh.; RIDER, Ye.Ya.; VIZEL'MAN, B.A., inzh.

Advanced technology reduces the idle time of local cars.
Zhel.dor.transp. 46 no.12:65-66 D '64.
(MIRA 19:1)

ACC NR: AP6032995 (A) SOURCE CODE: YU/0010/66/000/08-/0614/0633

AUTHOR: Barovic, D. (Colonel, Engineering corps); Vukomanovic, U. (Reserve lieutenant colonel, Engineering corps); Ridesic, I. (Major, Technical services; Graduate engineer)

ORG: none

TITLE: Demolition of the sluice gate of the Bajina Basta hydroelectric power plant

SOURCE: Vojnotehnicki glasnik, no. 8-9, 1966, 614-633

TOPIC TAGS: demolition, structure vibration, seismic wave

ABSTRACT: The selection of parameters, methods, and processes involved in successful demolition of the sluice gate of the Bajina Basta hydroelectric power plant are discussed. This demolition has yielded many useful data required for further studies into the problems of building and structure demolition. Measuring the intensity of seismic waves conditions made possible a more detailed investigation of the effects of explosions on various structures under various circumstances. Useful information was also obtained on the volume of explosives that can be set off

Card 1/2

ACC NR: AP6032995

without damaging neighboring structures. It was found that the intensity of seismic waves generally depends on two factors: 1) type and amount of explosives; and 2) type of material, size, and position of the structure to be demolished, and 3) type, size and position of the neighboring structures exposed to possible damage. It is recommended that a trial demolition precede the main one. Through such a trial demonstration, in addition to data obtained from seismic measurements, other demolition parameters, such as the optimum amount of explosive to be employed, can be determined. Orig. art. has: 8 figures.

SUB CODE: 15/SUBM DATE: none/

Card 2/2

1. RIDEVSKIY, Yu. I.

2. USSR (600)

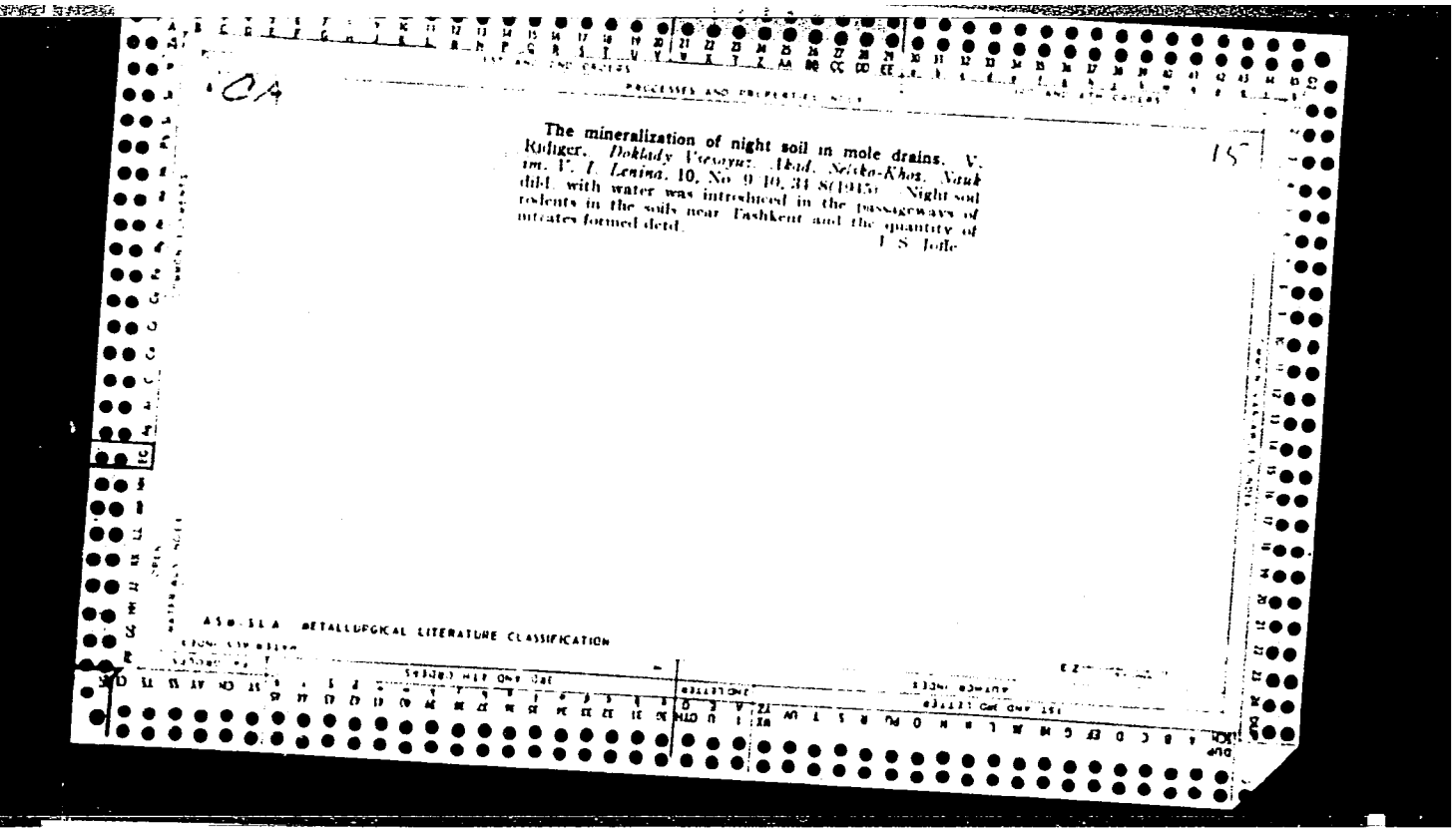
4. Walnut

7. Accelerated stratification of Manchurian walnut seeds. Les. khoz. 5 no. 11, 1952.

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

RIDIGER, T. B.
A. I. RABINOVITSCH, Kino-Photo Inst. Moscow, 1934, 2, 161-165

[redacted], T. P.
A. I. [redacted], Kino-Photo Inst. Moscow 2, 161-5, 1934



C4

15

The mineralization of night soil in mole drains. V. Rüdiger. *Doklady Vsesoyuz. Akad. Sel'sko-Khoz. Nauk im. V. I. Lenina.* 10, No. 9/10, 34-8(1945). Night soil diluted with water was introduced in the passageways of rodents in the soils near Tashkent and the quantity of nitrates formed detd.

I. S. Jolle

A50-11A METALLURGICAL LITERATURE CLASSIFICATION

RIDCHENKO, V.R., prof.

Subirrigation. Gidr. i mel. 10 no.3:30-34 Mr '58. (MIRA 11:4)
(Irrigation)

AUTHOR: Ridiger, V.R., Professor

99-58-3-6/12

TITLE: Mole Type Subsoil Irrigation (Krotovoye podpochvennoye orosheniye)

PERIODICAL: Gidrotekhnika i Melioratsiya, # 3, pp 30-34 (USSR)

ABSTRACT: The author describes the installation and operation of so-called subsoil "mole type" irrigation ducts. A special attachment to the plow "PP - 50" is used in their installation. With the aid of these subsurface ducts, which have a diameter of 10 cm and which are approximately 55 cm below the surface, subsurface irrigation can be carried out. The advantages offered by this type of irrigation, as compared with subsoil irrigation with installed pipes, is a quicker saturation of the ground. This type of irrigation offers special advantages in the growing of cotton, which requires numerous irrigations due to its long vegetation period. The author attributes the higher yields of various field crops not only to the moisture made available to the crops by this type of irrigation, but also to better aeration and a higher temperature of the soil. Further advantages are the ease of applying fertilizers and less danger of salinity as compared with surface irrigation.

Card 1/2

Mole Type Subsoil Irrigation

99-58-3-6/12

Mole type irrigation systems remain operative for 8-10 years when properly installed in loess soil.
There are 2 figures

AVAILABLE: Library of Congress

Card 2/2

1. RIDIGER, V. R.

2. USSR (600)

4. Irrigation

7. Underground "mole" irrigation and its mechanization, Dokl. Akad. sel'khoz., 18, no. 4, 1953.

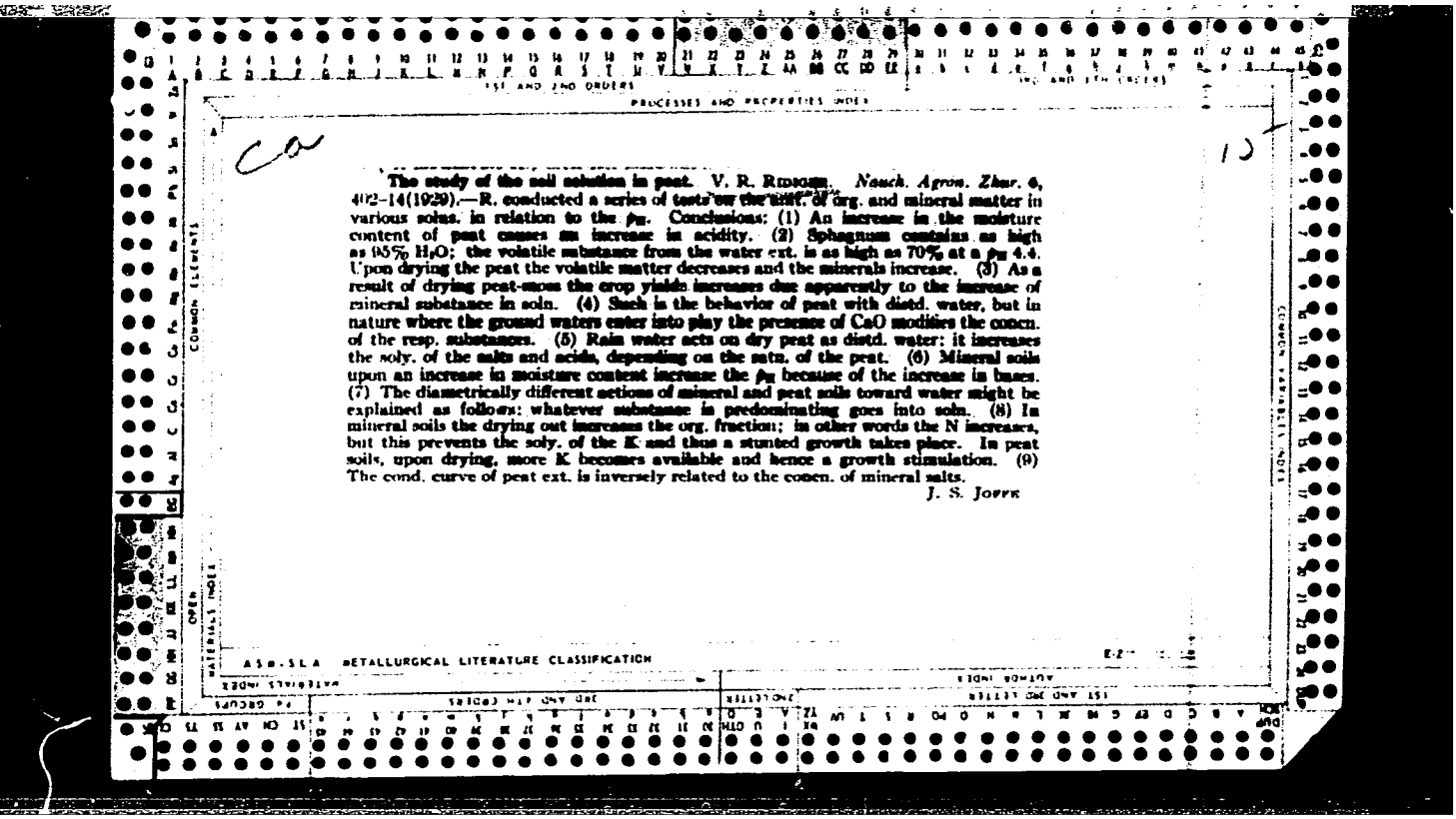
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

RIDIGER, V. R.; DOLGOV, S. I.

Drainage

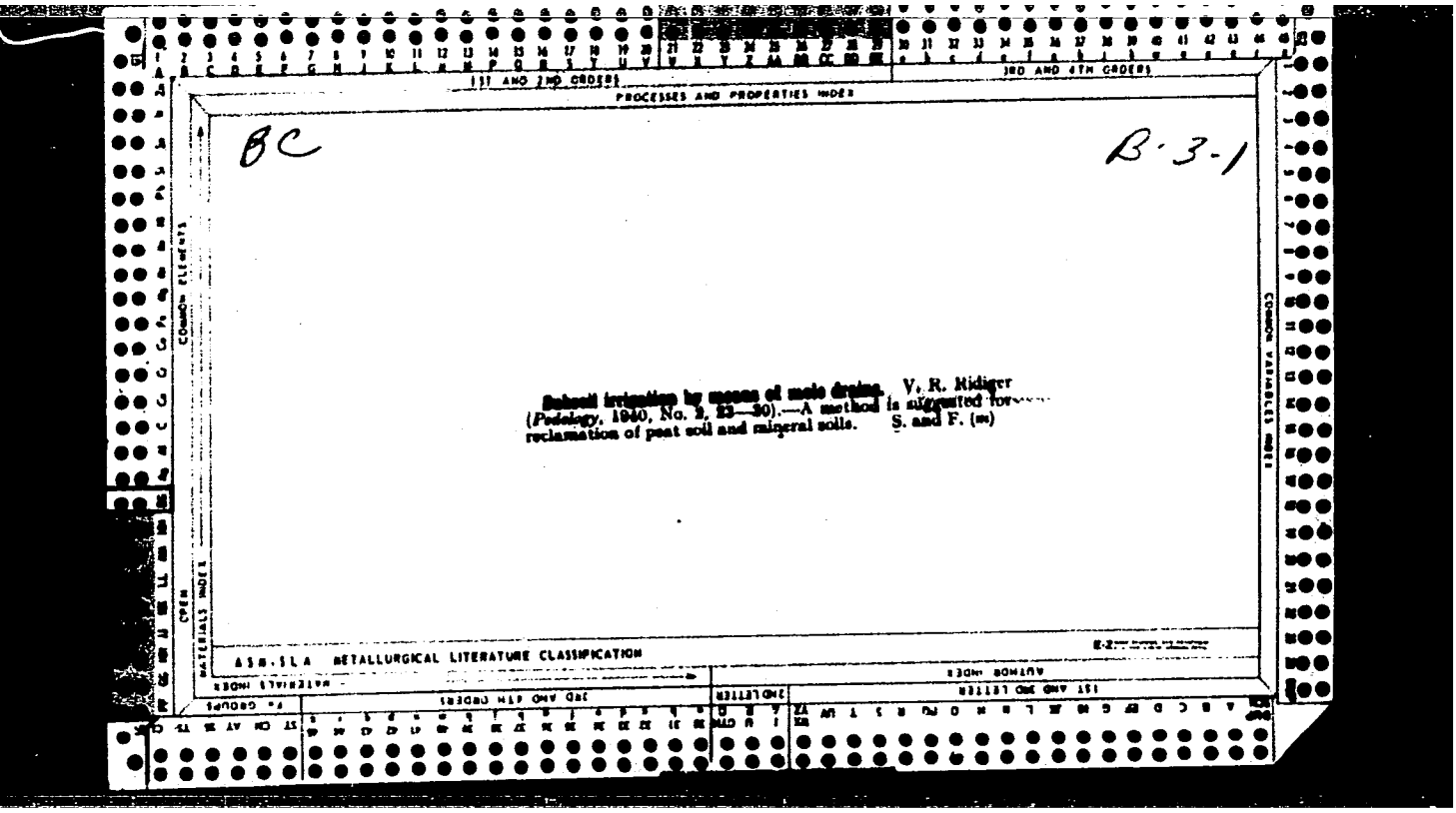
Using deep mole drains in reclaiming alkaline soils. Dokl. Ak. sel'khoz. 17 no. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.



The study of the soil solution in peat. V. R. Rimsha. *Nauch. Agron. Zhur.* 6, 402–14(1929).—R. conducted a series of tests on the diff. of org. and mineral matter in various solns. in relation to the p_H. Conclusions: (1) An increase in the moisture content of peat causes an increase in acidity. (2) Sphagnum contains as high as 95% H_2O; the volatile substance from the water ext. is as high as 70% at a p_H 4.4. Upon drying the peat the volatile matter decreases and the minerals increase. (3) As a result of drying peat-moss the crop yields increases due apparently to the increase of mineral substance in soln. (4) Such is the behavior of peat with distd. water, but in nature where the ground waters enter into play the presence of CaO modifies the concn. of the resp. substances. (5) Rain water acts on dry peat as distd. water: it increases the soly. of the salts and acids, depending on the satn. of the peat. (6) Mineral soils upon an increase in moisture content increase the p_H because of the increase in bases. (7) The diametrically different actions of mineral and peat soils toward water might be explained as follows: whatever substance is predominating goes into soln. (8) In mineral soils the drying out increases the org. fraction; in other words the N increases, but this prevents the soly. of the K and thus a stunted growth takes place. In peat soils, upon drying, more K becomes available and hence a growth stimulation. (9) The cond. curve of peat ext. is inversely related to the concn. of mineral salts.

J. S. Joffe



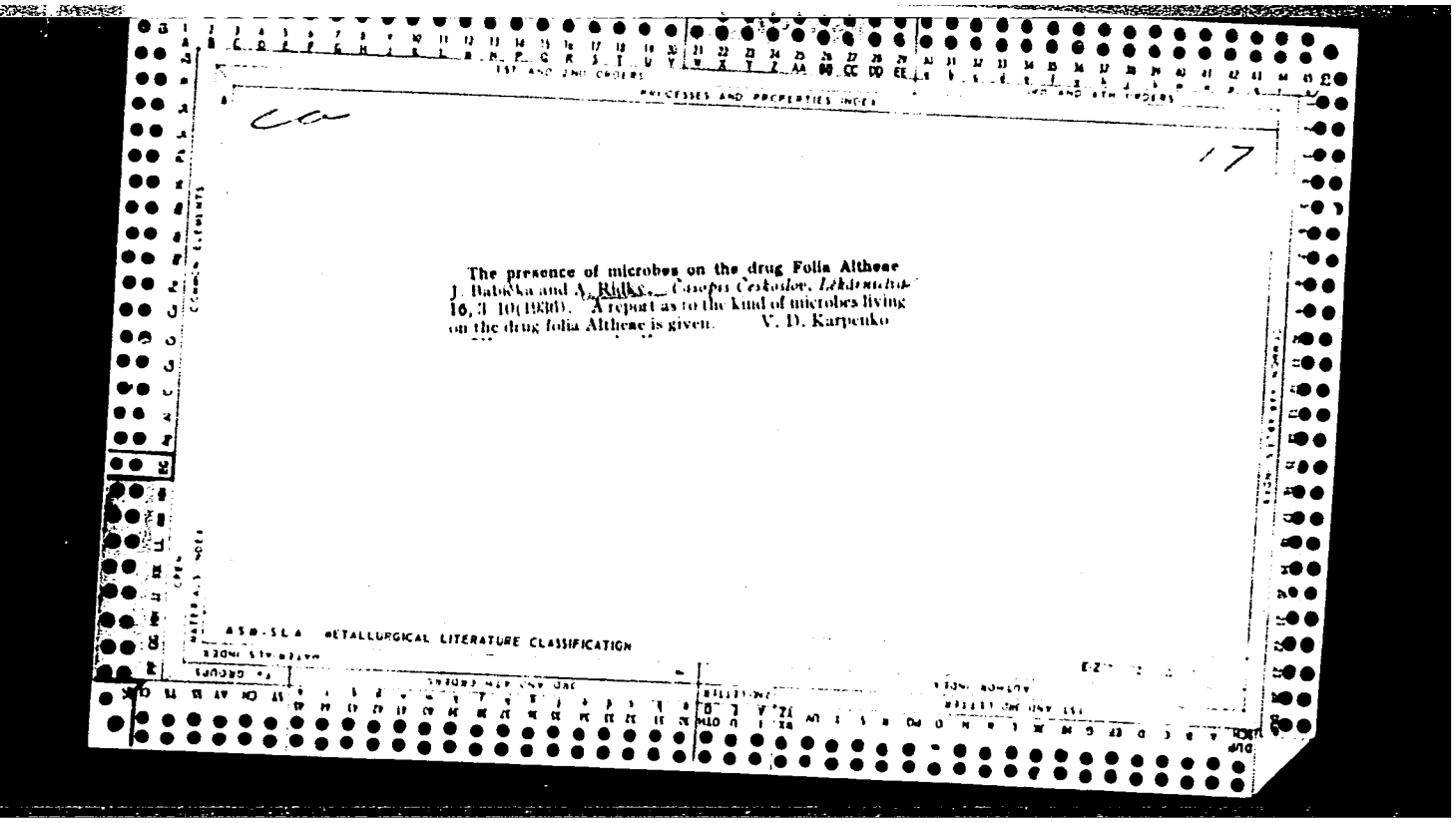
TOMIN, N.A.; RIDINGER, M.S.

Industrial training in factories. Politekh. obuch. no.1:43-48 Ja '57.
(MLRA 10:4)

1. Iz opyta sredney shkoly no.91 g. Chelyabinska.
(Technical education)

VINOGRADOV, B.A.; RIDIONOV, V.N.; SHEMYAKIN, Ye.I.

Scattering of a spherical volume of soil in a blast occurring in the symmetry center. PMTF no.3:36-42 S-O '61. (MIRA 14:8)
(Blasting) (Soil mechanics)



The presence of microbes on the drug Folia Altheae
J. Babička and A. Rilka. Časopis Českého Lékárnictva 16, 3–10(1936). A report as to the kind of microbes living on the drug folia Altheae is given. V. D. Karpenko

RIDKY, Karel

Soil microflora of winter wheat fields after various preceding crops. Rost vyroba 9 no.7/8:759-763 Jl-Ag '63.

1. Vyzkumna stanice zakladni agrotechniky a hnojeni, UVURV, Pohorelice u Brna.

RIDKY, Karel, dr.

Effect of the preceding crop on winter wheat. Pt. 2. Rost vyroba 10 no.8:785-798 Jl '64

1. Central Research Institute of Plant Production, Research Station of Basic Agricultural Engineering and Fertilization, Pohorelice.

RIDKY, Karel, RNDr.

Effect of the tillage with rotary and subsoil plows on soil microflora. Zemedel tech. 10 no.12:761-770 D '64.

1. Research Station of Basic Agrotechny and Fertilizing, Pohorelice near Brno. Head of the Station: [inz. Csc.] Antonin Stranak. Submitted on September 7, 1964.

CZECHOSLOVAKIA/Soil Science - Biology of Soils. J.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67929

Author : Ridky, Karel

Inst : Czechoslovakian Agricultural Academy.

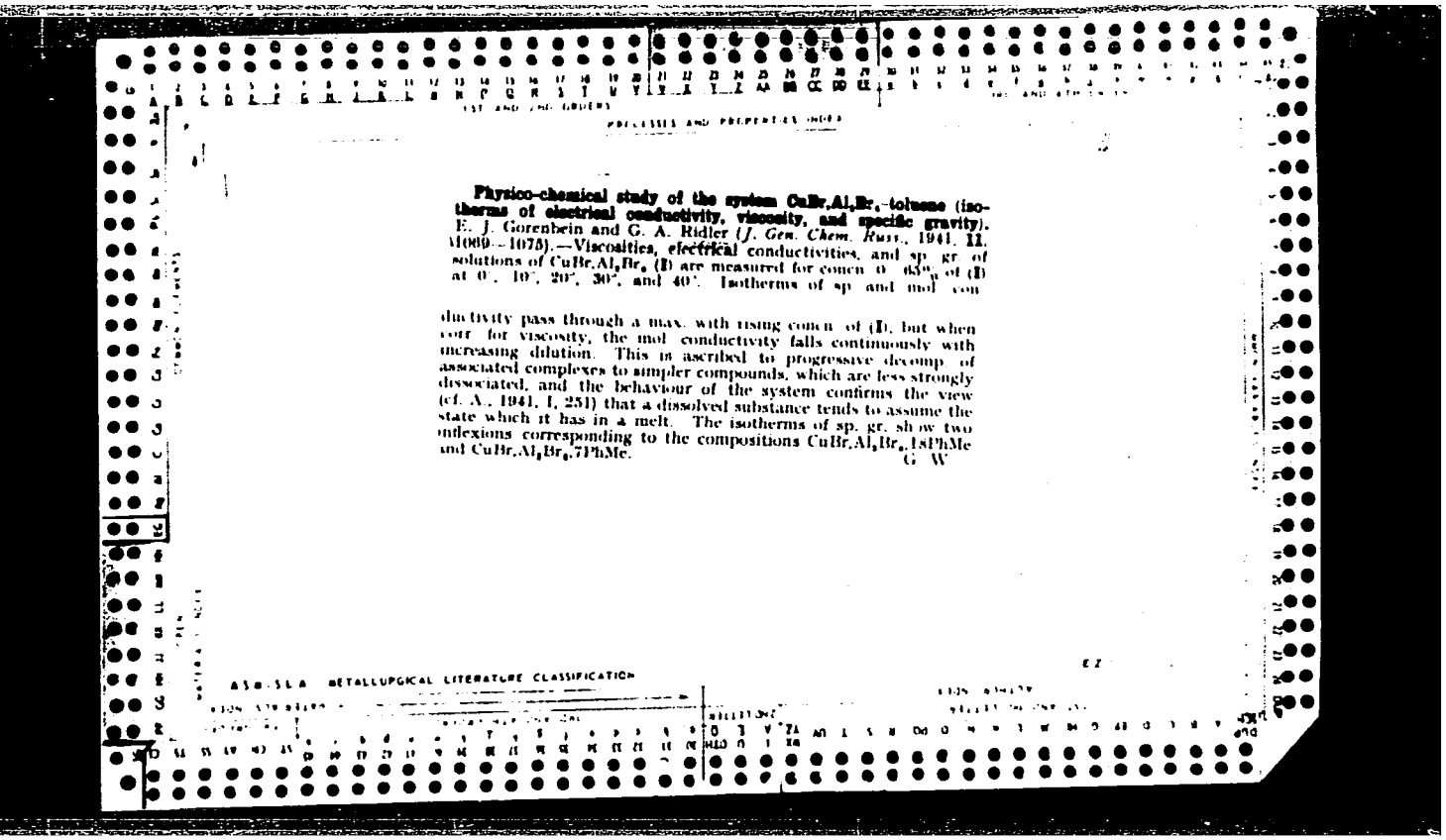
Title : Results of an Investigation of the Effects of a Grass-field Rotation System on Soil Microflora in 1953 (Preliminary Report).

Orig Pub : Sbor. Ceskosl. akad. zemed. ved. Rostl. vyroba, 1955, 28, No 3-4, 193-196.

Abstract : No abstract.

Card 1/1

Physico-chemical study of the system $CuBr_2$,Al_2Br_6–toluene (isotherms of electrical conductivity, viscosity, and specific gravity). I. J. Gorenbein and G. A. Ridler (*J. Gen. Chem. Russ.*, 1941, **11**, 1069–1075).—Viscosities, electrical conductivities, and sp. gr. of solutions of $CuBr_2Al_2Br_6$ (I) are measured for concn. 0–85% of (I) at 0°, 10°, 20°, 30°, and 40°. Isotherms of sp. and mol. conductivity pass through a max. with rising concn. of (I), but when corr. for viscosity, the mol. conductivity falls continuously with increasing dilution. This is ascribed to progressive decomp. of associated complexes to simpler compounds, which are less strongly dissociated, and the behaviour of the system confirms the view (cf. A., 1941, I, 251) that a dissolved substance tends to assume the state which it has in a melt. The isotherms of sp. gr. show two inflexions corresponding to the compositions $CuBr_2Al_2Br_6$.1$\frac{1}{2}$PhMe and $CuBr_2Al_2Br_6$.7PhMe. G. W.



Physico-chemical study of the system $CuBr_2$,Al_2Br_6–toluene (isotherms of electrical conductivity, viscosity, and specific gravity). E. J. Gorenbein and G. A. Ridler (*J. Gen. Chem. Russ.*, 1941, **11**, 1069–1075).—Viscosities, electrical conductivities, and sp. gr. of solutions of $CuBr_2Al_2Br_6$ (I) are measured for concn. 0–65% of (I) at 0°, 10°, 20°, 30°, and 40°. Isotherms of sp. and mol. conductivity pass through a max. with rising concn. of (I), but when corr. for viscosity, the mol. conductivity falls continuously with increasing dilution. This is ascribed to progressive decomp. of associated complexes to simpler compounds, which are less strongly dissociated, and the behaviour of the system confirms the view (cf. A., 1941, I, 251) that a dissolved substance tends to assume the state which it has in a melt. The isotherms of sp. gr. show two inflexions corresponding to the compositions $CuBr_2Al_2Br_6$,1$\frac{1}{2}$PhMe and $CuBr_2Al_2Br_6$,7PhMe.

G. W.

RIDNER, Z.A.

SOV/124-58-4-4883

Translation from: Referativnyy zhurnal. Mekhanika, 1958, Nr 4, p 167 (USSR)

AUTHORS: Chekmarev, A. R., Ridner, Z. A.

TITLE: Actual Resistance of Carbon Steels to Plastic Deformation at Elevated Temperatures and High Strain Rates (Istinnoye soprotivleniye plasticheskomu deformirovaniyu uglerodistykh staley pri vysokikh temperaturakh i skorostyakh deformirovaniya)

PERIODICAL: Tr. In-ta chernoy metallurgii. AN UkrSSR, 1957, Vol 11, pp 18-32

ABSTRACT: Influence of strain conditions (temperature t, strain rate v, and total strain ε) upon the resistance s of carbon steels under monoaxial tension was investigated. The following expression was utilized: $s = P(1 + \varepsilon)/F_0$ where P is the load, F_0 is the initial cross-sectional area. A description is given of the high-speed tensile-rupture test installation used allowing to attain strain rates of $v = 400\ sec^{-1}$. A recording dynamometric device insured registration of processes with a frequency of up to 400 cps and a minimum test duration of 1/300 sec. Test samples consisting of cylinders with diameter-to-length ratio of 1/6 were heated to 800-1200°C. Conclusions based on the

Card 1/2

Actual Resistance of Carbon Steels (cont.)

results of experiments on 10, 20, 45, U7A, and U10A steels were formulated and, aside from the well-known facts, a hypothesis was made that s increases with an increase in v and ε but is dependent upon the carbon content of the steel, although for some steels s decreases with an increase in carbon content.

I. K. Snitko

1. Steel--Deformation 2. Steel--Stresses 3. Steel--Temperature factors 4. Steel--Test results

Card 2/2

Ridner Z. A

137-1958-2-2777

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 81 (USSR)

AUTHORS. Chekmarev, A.P., Ridner, Z.A.

TITLE: The Real Resistance to Plastic Flow in Carbon Steels When Temperatures and Deformation Rates Are High (Istinnoye soprotivleniye plasticheskomy deformirovaniyu uglerodistykh staley pri vysokikh temperaturakh i skorostyakh deformirovaniya)

PERIODICAL: Tr. In-ta chernoy metallurgii AN UkrSSR 1957, Nr 11, pp 18-32

ABSTRACT: Numerous experiments were conducted on the dynamic testing in tension of specimens of steels 10, 20, 45, U7A, and U10A, which had been cut from rolled rods 18-22 mm in diameter on a specially designed high-speed tensile-testing machine; throughout the tensile-testing period the elongation speed remained constant. The deformation rates obtaining during the experiments were 2-400 sec^{-1}, the temperatures 800-1200°. An analysis of the results of these experiments led to various conclusions concerning the effect of the deformation rate, temperature, degree of deformation, and chemical composition on the resistance of the metal to plastic flow under the conditions studied.

V.D.

Card 1/1

1. Steel--Plastic flow--Resistance 2. Steel--Temperature effects 3. Steel--Deformation

24-12-4/24

AUTHORS: Ridner, Z.A. and Chekmarev, A.P. (Dnepropetrovsk).

TITLE: Influence of the temperature, the speed and the degree of deformation on the resistance to plastic deformation of carbon steels. (Vliyaniye temperatury, skorosti i stepeni deformatsii na soprotivleniye plasticheskomu deformirovaniyu uglerodistykh staley).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.12, pp.22-29 (USSR)

ABSTRACT: The resistance to plastic deformation of carbon steels was investigated for hot shaping by pressure at various temperatures, speeds and reductions. Taking into consideration the practical conditions of heat treatment of carbon steels, the shaping temperatures were chosen between 800 and 1200°C; the deformation speeds were between 2 to 300 sec^{-1}, which corresponds to the most frequently occurring conditions of shaping by applying pressure. The reduction was determined from the size of the section on the diagram of dynamic stretching (up to the beginning of formation of a neck, since from this instant onwards the stress state changed from a linear to a three-dimensional one). The test set-up, a sketch of which is shown in Fig.1, permits uniaxial tensile loading with deformation speeds between 2 to 300 sec^{-1}. For

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Influence of the temperature, the speed and the degree of deformation on the resistance to plastic deformation of carbon steels.

obtaining dynamic stretching with a constant speed during the entire period of the tensile strength test, a high speed test machine was used, the design of which is based on a rolling stand with a flywheel. The rolling stand was driven by a 230 h.p., d.c. motor which was part of a Ward-Leonard unit and enabled wide variation of the r.p.m. The flywheel was of 4000 mm dia. weighing 12 000 kg and a semi-sleeve of 900 mm dia. was rigidly fixed on the shaft. The test set-up consisted of the drive, the flywheel, the half-sleeve and two hammers which were fixed to the semi-sleeve and two vertical columns supporting a heavy beam which carried the experimental specimen in the vertical position and also metering instruments for determining the deformation forces. According to calculations, the duration of fracture of a specimen exceeded 0.0033 sec at the highest speed of the hammers; assuming that the process approaches that of harmonic oscillations, the duration of the fracture of the specimen can be considered as half of an harmonic

 oscillation with a frequency of 150 c.p.s. Harmonic

Influence of the temperature, the speed and the degree of deformation on the resistance to plastic deformation of carbon steels.

analysis of the force-time curve shows higher components; at the maximum deformation speed the amplitude of the third harmonic is 4.65% of the amplitude of the fundamental. Therefore, recording apparatus with a pass-band of up to 400 c.p.s. can be used. The deformation stresses were measured by means of a wire strain gauge, the terminals of which were connected to a three-stage low frequency amplifier, which permitted correct recording of processes at speeds up to 400 c.p.s. The electrical circuit diagram of the test apparatus is shown in Fig.3, p.24. For recording the process of fracture, contacts were so arranged that an oscillograph with an electromagnetic feeding of the recording film was put into operation when the hammers were at a distance of 100 mm from the specimen to be hit. The specimens consisted of five different carbon steels with composition as given in the Table, p.25. The dimensions of the specimens are entered in the drawing, Fig.4, and these were produced from rolled rods of 18 to 22 mm dia. Prior to machining, the rods were normalised in a muffle electric furnace at

Influence of the temperature, the speed and the degree of deformation on the resistance to plastic deformation of carbon steels.

a temperature 25 to 30°C higher than the upper critical point. Heating of the specimens to the desired temperature was effected after fitting them into the test set-up, using an electric furnace specially designed for the purpose. The specimen temperature was measured by means of thermocouples at the middle of the length of the specimen. Heating of the specimens to the required temperature took five to eight minutes and the temperature was held for another five to seven minutes so as to equalise it throughout the cross section. The used test set-up permits obtaining oscillograms analogous to those obtained during static tensile tests (Fig.5, p.26); on the oscillograms the vertical axis represents the deformation stresses, whilst the horizontal axis represents time. Evaluation of the oscillograms yielded graphs of the relation "real resistance to deformation vs. logarithm of the deformation speed" and such a graph for "Steel 45", with a reduction of 12%, is reproduced in Fig.6. From analysis of the relations obtained experimentally and entered in Figs.7-11, the following conclusions can be

 made on the influence of individual factors on the

Influence of the temperature, the speed and the degree of deformation on the resistance to plastic deformation of carbon steels.

resistance of the metal to plastic deformation: due to the effect of the heavy flywheel, stretching of the specimen proceeded with a constant speed; the speed of the light sensitive recording film was also constant. Consequently, the abscissa of the tension curve in the oscillogram can be compared with absolute elongation of the specimen and the horizontal projection of the curve will correspond to the elongation of the specimen during tension. Knowing the initial length of the specimen and its elongation during the tensile test, it is possible to determine the relative elongation for each point of the oscillogram by assuming constancy of the deformed volume of the metal. The resistance to plastic deformation increases with increasing deformation speed and the respective values differ greatly depending on the particular grade of steel; numerical values are given for the five tested steels for the deformation speeds of 10 and 100 sec^{-1}. With increasing temperature, the resistance to plastic deformation decreases and the decrease has the same character for all the carbon steels.

Card 5/6 The influence of the degree of deformation on the

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resistance of the metals to deformation was found to be identical for all the tested grades of steel. With increasing carbon content in below-eutectoidal steels, the resistance to plastic deformation increases with increasing temperature at relatively small deformation speeds; at elevated temperatures and higher deformation speeds, the resistance to plastic deformation decreases with decreasing carbon contents in below-eutectoidal steels. In above-eutectoidal steels, changes in the carbon content do not have an appreciable influence on the resistance to plastic deformation at elevated temperatures.
There are 11 figures and 1 table,

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