"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

35. S. M. Borodachev (Kiltashes): On the solution of the dynamic contact problem for a half-space under conditions of axial symmetry.

36. J. Brilla (Bratislava). Anisotropic plates with discontinuous supports.

37. S. M. Brovko (Moscow): On the essential non-linearity of certain problems on column stability.

38. B. G. Budiny (Kiev), S. V. Serensen (Moscow): On the determination of safety factors under alternating random loads.

39. A. V. Burlakov (Kharkov): An experimental investigation of creep of turbine Lagrange models.

40. S. P. Burmistov (Saratov): On the stability of constructionally anisotropic circular ring plates.

41. St. Balan, V. Petcu, St. Sautu (Bucharest): The field of application of anamoplasticity.

42. B. S. Bylchenko (Kiev): The state of stress of lamellar systems of regular configuration.

43. V. V. Bolshakov (Moscow): Thixotropic properties of lubricants on basis of their rheological characteristics.

44. G. A. Van-Fo-Fi, G. N. Savin (Kiev): Application of Mathieu functions to the investigation of shells.

45. P. M. Varvak (Kiev): Determination of stresses and deformations in massive bodies.

46. B. V. Bulanov (Gorkii): The flow of bitumens and filled bitumens in pipes.

47. I. I. Vekua, V. I. Mushkelishvili (Tbilisi): Applications of analytic functions in the theory of elasticity.

48. I. Ia. Vinov (Tbilisi), V. V. Mikhailov (Kreval): Experimental investigation of the behavior of axentrically compressed short columns for long loading times.

49. G. V. Vinogradov (Moscow), A. A. Nazarov (Kazan), V. P. Parlov (Moscow): Investigation of soft plastic bodies under combined states of stress.

50. G. V. Vinogradov, V. P. Parlov (Moscow): Basic peculiarities of the mechanical properties of plastic lubricants.

51. G. I. Vinokur (Leningrad): Fundamentals of the linear theory of visco-elastic impact.

52. I. I. Vinogrov (Kharkov): The solution of dynamic contact problems for foundations using a simplified model.

53. A. F. Vlasov (Moscow): On the equilibrium equations of thick elastic plates.

54. E. F. Vodkovskii (Yakutsk): The creep of ice and frozen soils under combined stresses.

55. E. F. Volarovich, G. Ia. Voronkov, E. F. Kovalevskii, G. I. Shakhov (Moscow): Studies of viscoelastic properties of porous bodies (e.g. peat) by the ultrasonic pulse method.

56. E. F. Volarovich (Moscow), A. Sh. Ela (Minsk): The plane flow of a visco-plastic medium between two planes forming an acute angle.

57. E. F. Volarovich, E. E. Orokin (Moscow): Kinematics and dynamics of the flow of visco-plastic dispersed media past bodies of different shapes.

58. A. S. Volmir (Moscow): On the analysis of a short closed cylindrical shell.

59. S. D. Volkov, S. A. Eliashkin (Sverdlovsk): On the distribution of elastic constants in quasi-isotropic polycrystalline media.

60. I. I. Vorovich (Rostov-na-Donu): A statistical method in the stability theory of shells.

61. I. I. Vorovich (Rostov-na-Donu), A. S. Kosmodamianskii (Saratov): On stress concentration in a plate with an infinite number of holes.

62. S. P. Timoshenko (Leningrad): Foundations of the general engineering theory of elastic beams.

63. S. S. Vialov (Moscow): The laws of deformation of ice.

64. S. S. Vialov (Moscow): The laws of motion of ice sheets and the theory of visco-plastic flow based on research in the Antarctic.

65. S. S. Galilov (Leningrad): A method of obtaining polynomial stress and displacement functions.

66. S. I. Galiev (Kazan): A contribution to the theory of the plastic deformations of thin shells.

67. S. P. Galin (Moscow): The propagation of elastic-plastic bending and shear waves in the antisymmetrical deformations of shells.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

BAUTU, S.; IFRIM, M.

Certain problems of proper vibrations in construction. p 457. Academia Republicii Populare Romine. Institutul de Mecanica Aplicata. STUDII SI CERCETARI DE MECANICA APLICATA. Bucuresti. Vol. 6, no. 3/4, July/Dec. 1955.

So. East European Accessions List Vol. 5, No. 9 September, 1956

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUTU SANDU

Calculul Vibrațiilor Cadrelor Prin Aproximări Succesive. Sandu Răutu. *Stud. Cerc. Mec. Aplic.*, Jan.-Mar., 1960, pp. 151–171. 11 refs. In Rumanian. Application of successive approximations to calculate vibration in structures.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

BALAN, Stefan; RAUTU, Sandu; PETCU, Valeriu

Breaking points for statically indeterminate beams of variable cross section. Studii cerc mec apl 12 no.5:949-958 '61.

1. Membru corespondent al Academiei R.P.R. (for Balan). 2. Institutul de constructii, Bucuresti (for Rautu). 3. Institutul de cercetari in constructii si economia constructiilor (INCERC), Bucuresti (for Petcu).

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUYER, A. E.

N/5
645.2
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1954

Plasticheskiye operatsii na litse (Plastic face surgery by) A. E. Rauyer i N. M. Mikhel'son. Izd. 2 dop. i is pr. Moskva, Medgiz, 1954. 301 p. illus. Bibliography: p. 299-302.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZ, S. G.

Agriculture

Best sorts of edible vine-crops and potatoes for collective farm fields. Alma-ata, Kazgosizdat, 1951.

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

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZEN, F.V.; SOLOV'YEVA, Z.Ya.

Removal of radioisotopes from waste waters. Atom. energ. 18 no.6:623-626 Je '65. (MIRA 18:7)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

L 2284-66 EWT(m)/EPF(c)/ETC/EPF(n)-2/EWG(m) WW/DM

ACCESSION NR: AP5016931 UR/0089/65/018/006/0623/0626
621.039.7

AUTHORS: Rauzen, F. V.; Solov'yova, Z. Ya.

44
B

TITLE: Removal of radioactive isotopes from waste water

SOURCE: Atomnaya energiya, v. 18, no. 6, 1965, 623-626

TOPIC TAGS: radioactive waste disposal, coagulation, ion exchange

19

ABSTRACT: The purpose of the investigation was to verify that the technicological scheme of a waste-water purification station, described at the Second Geneva Conference by K. A. Bol'shakov et al. (Trudy Vtoroy mezhdunarodnoy konferentsii po mirnomu ispol'zovaniyu atomnoy energii. Dokl. sovetsk. uchenykh [Transactions of Second International Conference on Peaceful Uses of Atomic Energy. Papers by Soviet Scientists], Atomizdat 1959, page 189), special experiments were set up on solutions containing one or several specially added radioactive isotopes. The various radioactive isotopes were then eliminated from the solutions first by coagulation, and then by ion

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ACCESSION NR: AP5016931

exchange through filtering with ionites. The results showed that a successive treatment of low-activity waste water by coagulation and by two-stage ion exchange can reduce the concentration of the radioactive isotopes below the maximum permissible value, for all radioactive isotopes. The removal of the radioactive isotopes from the waste solutions by the ionites is directly dependent on the salinity of the solution. With increasing content of salts in the filtrates past the ionite columns, the concentration of the radioactive isotopes in them increases. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 22May64 ENCL: 00 SUB CODE: NP

NR REF SOV: 011 OTHER: 002

Card 2/2 DP

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

F. V. RAUZEN

"METHODS FOR REMOVAL OF RADIOACTIVE SUBSTANCES FROM LEAKAGE AND RESEARCH INSTITUTIONS" by K. A. Bolshakov, F. V. Rauzen

Report presented at 2nd UN Atoms-for-Peace Conference, Geneva, 9-13 Sept 1958

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

PHASE I BOOK EXPLOITATION SOV/5024

International Conference on the Peaceful Uses of Atomic Energy. 2d, Geneva, 1958.

Doklady sovetskikh uchenykh. [t.4] Khimiya radioelementov i radiatsionnykh prevrashcheniy (Reports of Soviet Scientists. v. 4.: Chemistry of Radioelements and Radiation Transformations) Moscow, Atomizdat, 1959. 323 p. 8,000 copies printed. (Series: Its: Trudy)

Ed. (Title page): A. P. Vinogradov, Academician; Ed.: V. I. Labaznov; Tech. Ed.: Ye. L. Mazel'.

PURPOSE: This collection of articles is intended for scientists and engineers interested in the applications of radioactive materials in science and industry.

COVERAGE: The book contains 26 separate studies concerning various aspects of the chemistry of certain radioactive elements and the processes of radiation effect on matter. These reports discuss present-day methods of reprocessing irradiated nuclear fuel, research in the chemistry of mercury, thorium, uranium, plutonium, and americium, problems related to the sorption and burying of radioactive wastes, the radiolysis of aqueous solutions and of organic compounds, the mechanism of polymer chain grafting, and the effect of radiation on natural and synthetic rubbers. V. N. Prusakov edited the present volume. Most of the reports are accompanied by references. Contributors to individual investigations are mentioned in annotations to the Table of Contents.

Alenchikova, I. F., L. L. Zaytseva, L. V. Lipis, V. V. Fomin, and N. T. Chebotarev. Production and Properties of Several Binary Fluorides of Tetravalent Plutonium (Report No. 2208) 137

Yakovlev, G. N., and V. N. Kosyakov. Investigations on the Chemistry of Americium (Report No. 2127) 147
[D. S. Gorenko-Germanov is mentioned as having supplied the material for the second section of this study.]

Zvyagintsev, O. Ye., V. D. Nikol'skiy, S. M. Starostin, A. Kurbanov, and V. S. Shmidt. Contribution to the Chemistry of Radioactive Ruthenium (Report No. 2143) 166

Spitsyn, V. I., V. D. Balukova, A. F. Naumova, V. V. Gromov, F. M. Spiridonov, Ye. M. Vetrov, and G. I. Grafov. Study of the Migration of Radioactive Elements in Soils (Report No. 2207) 174

Voznesenskiy, S. A., G. A. Sereda, P. F. Dolgikh, and L. I. Baskov. Detoxication of Low-Salt-Content and Low-Activity Waste Waters From Radiochemical Plants (Report No. 2024) 189

Bol'shakov, K. A., A. T. Avdonin, V. T. Borshchev, F. V. Rauzen, and others. Experimental Industrial Plant for Purification of Laboratory Waste Waters Contaminated With Radioactive Elements (Report No. 2025) 194

Rogorov, V. G., and Ye. M. Kreps. On the Possibility of Burying Radioactive Wastes in Deep-Water Depressions of the Ocean (Report No. 2058) 204

Proskurnin, M. A., and Ya. M. Kolotyrkin. Investigations Into the Radio-chemistry of Aqueous Solutions (Report No. 2022) 211
[The investigations were carried out at the Laboratoriya radiatsionnoy khimii fiziko-khimicheskogo instituta im. L. Ya. Karpova (Laboratory of Radiation Chemistry of the Physicochemical Institute imeni L. Ya. Karpov) under the direction of M. A. Proskurnin, V. D. Orekhov, Ye. V. Barelko, and A. I. Chernova. The data on oxidation reduction reactions taking place in aqueous solutions under the effect of γ-radiation were obtained from investigations made at the Laboratoriya korrozii i elektrokhimii metallov (Laboratory of Corrosion and Electrochemistry of Metals) under the direction of Ya. M. Kolotyrkin, N. Ya. Bune, and G. S. Tyurikov. The following are mentioned as having made a study of conjugate reactions such as the formation of dyes from leuco bases: V. D. Orekhov, A. A. Zansokhova, L. I. Belen'kiy, T. V. Bromberg, and N. Ye. Kazanskaya.]

Rakh, N. A., V. I. Medvedovskiy, and V. V. Sarayeva. Radiolysis and Radiation Oxidation of Organic Compounds (Report No. 2295) 229
[The following are mentioned: N. S. Kelosova and V. F. Tsurikov,

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RAUZEN, M.

[Publicizing the great construction works of communism in clubs] Propaganda velikikh stroek kommunizma v klube. Moskva, Goskul'tprosvetizdat, 1952. 66 p. (MLRA 7:2)

(Russia--Public works)

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30880. HAIZEN, M.

Slovo uchenogo. (O lektsii A. K. Priymak "Michurinskiye osnovy sozdaniya novykh sortov plodovoyagodnykh kul'tur" v kolkhoze "Krasnyy putilovets." Krasnodarsk. Kray). Kul't.-prosvet. rabota, 1949, No. 9, s. 30-34. zh. Lesovodstvo.

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RAUZEN, M. and SAMSONOV, V.

"Propaganda Velikikh Stroyek Kommunizma v Klube," Moscow, 1952

Summary translation W-26100, 30 Apr 53

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER, E.K.

BERNSHTEYN, M.M., kandidat tekhnicheskikh nauk; RAUZER, E.K., inzhener.

Introducing a new method of testing the durability of gluing soles and of statistical quality control. Leg.prom. 14 no.4:16-19 Ap '54. (MLRA 7:6)
(Boots and shoes) (Quality control)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D. M.

"New Data on the Stratigraphy of the Upper Carboniferous of the Oksk-Zninsk Bank," Dokl. AN SSSR, 30, No.5, 1941

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D. M.

"Stratigraphy and Phases of the Upper Carboniferous Artinskan Deposits of the Bashkir Pre-Ural Depression (on the basis of the study of Fusulina): I and II," 1947

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D. M., AND OTHERS

Geology, Stratigraphic

Stratigraphy and foraminifera of the Early Carboniferous of the Russian Platform and the Ural region. Trudy Inst. geol. nauk AN SSSR, No. 62, 1948.

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

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D. M.

Foraminifera

Materials on foraminferous fauna of the Carboniferous deposits in Central Kazakhstan. Trudy Inst. geol. nauk AN SSSR no. 66, 1948.

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

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

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RAUZER-CHERNOUSOVA, D. M.

"Bashkir or Kayal'skiy Layer?" Is. Ak. Nauk SSSR, Ser. Geol., No.2, 1949

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

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RAUZER-CHERNOUSOVA, D. M.

36635. Rauzer-Chernousova, D. M. i Kulik, Ye. I. Ob Otnoshenii Fuzulinid K Fatsiyam i O Periodichonsti V Ikh Razvitii. Izvestiya Akad. Nauk SSSR, Seriya Geol., 1949, No. 6, c. 131-48.

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

USSR/Geology - Paleontology
Carboniferous Deposits

Nov/Dec 49

"Relation of Fusulinids to Facies and Periodicity in Their Development," D. M. Rauzer-Chernousova, Ye. L. Kulik, 18 pp

"Iz Ak Nauk SSSR, Ser Geol" No 6

Discusses influence of various factors of external medium upon development of Fusulinids. Establishes that certain types of shells are adapted to definite facies and that ability to adapt to different ecological conditions increases in the process of development of species and families. Definite periodicity

152T39

[redacted]

USSR/Geology - Paleontology
(Contd)

Nov/Dec 49

is observed in appearance of new forms and in number of species and families. Their periodicity coincides roughly with cyclic behavior of sedimentary accumulation processes.

152T39

[redacted]

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER--[illegible], D. M.

21554 RAUZER--CHERNOUSOVA, D. M.

Ob ontogeneze nekotorykh paleozoyskikh foraminifer.
Trudy Paleontol. in - ta (Akad. nauk SSSR), t. XX, 1949, s. 339 - 53.
Bibliogr: s. 353.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D. M.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-5, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Rauzer-Chernousova, D. M. Grozdilova, L. P. Reytlinger, Ye. A. Vissarionova, A. Ya. Shamov, D. F. Lipina, O. A.	Middle Carboniferous Fusilinides of the Russian Platform and Adjacent Areas"	Institute of Geological Sciences Academy of Sciences USSR

[illegible] / July [illegible]

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

NALIVKIN, D.V., akademik, redaktor; MENNER, V.V., redaktor; RAUZER-CHERNOUSOVA, D.M.; REYTLINGER, Ye.A.; BALASHOVA, N.N.; DALMATSKAYA, I.I.; CHERNOVA, Ye.I.

[Regional stratigraphy of the U.S.S.R.] Regional'naia stratigrafiia SSSR. Vol. 2. [Stratigraphy of the middle carboniferous deposits in the central and eastern parts of the Russian Platform; on the basis of foraminifera study] Stratigrafiia srednekamennougol'nykh otlozhenii tsentral'noi i vostochnoi chastei Russkoi platformy; na osnove izucheniia foraminifer. Pt. 1. [The Moscow Basin] Moskovskaia sineklisa. Glav. red. D.V.Nalivkin, V.V.Menner. Moskva, Izd-vo Akademii nauk SSSR. 1954. 270 p. (MLRA8:2)

1. Akademiya nauk SSSR. Institut geologicheskikh nauk.
(Moscow Basin--Geology, Stratigraphic)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M. ; DALMATSKAYA, I.I.

New middle Carboniferous foraminifera from the Mordvinian S.S.S.R. and Penza Province. Paleont.sbor. no.1:82-90 '54. (MLRA 8:10)
(Mordvinian A.S.S.R.--Foraminifera, Fossil) (Penza Province--Foraminifera, Fossil)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

15-57-5-5770

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5, p 9 (USSR)

AUTHORS: Rauzer-Chernousova, D. M., Dalmatskaya, I. I.

TITLE: Stratigraphy and the Foraminifera of the Middle Carboniferous Strata in the Southeastern Border of the Moscow Synclase (Tokmovskiy Arch) /Stratigrafiya i foraminifery srednekamennougol'nykh otlozheniy yugo-vostochnoy okrainy Moskovskoy sineklizy (Tokmovskiy svod)/

PERIODICAL: V sb: Regional'naya stratigrafiya SSSR, Vol 2, Moscow, Izd-vo AN SSSR, 1954, pp 201-254.

ABSTRACT: Bibliographic entry

Card 1/1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

Criteria of lower systematic units of fossil foraminifera. Biul. MOIP. Otd.geol. 29 no.5:96-97 S-O '54. (MLRA 8:1)
(Foraminifera, Fossil)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

LIPINA, O.A.; SHATSKIY, N.S., akademik, redaktor; RAUZER-CHERNOUSOVA, D.M., redaktor; LADYCHUK, L.P, redaktor; NEVRAYEVA, N.A., tekhnicheskiy redaktor.

Foraminifera of the Tournai stage and the upper division of the Devonian in the Volga-Ural region and the western slope of the Central Urals. Trudy Inst. geol. nauk no.163:3-96 '55. (MLRA 8:7)

(Volga Valley--Foraminifera, Fossil) (Ural Mountain region--Foraminifera, Fossil)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

Zones of fusulinids and their correlations to other stratigraphic subdivisions. Biul.MOIP. Otd.geol.30 no.4:67-70 Jl-Ag '55. (MLRA 8:12)

(Foraminifera, Fossil) (Geology, Stratigraphic)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.; ROZOVSKAYA, S.Ye.

Systematics and phylogeny of the Fusulinidae. Biul.MOIP.Otd. geol. 30 no.6:99-100 N-D '55. (MLRA 9:4)
(Foraminifera, Fossil)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

KAUFMAN-CHERNOUSOVA, D. M., and KOZOVSKAYA, S. Ye.

"The Systematism and Phylogeny of Fusulinae"

A paper presented on 20 May, The Activity of the Moscow Society of Naturalists, Byulleten' Moskovskogo Obshchestva Ispytateley Prirody Vol LX

No 6, Moscow, Nov-Dec 1955, pp 80-90, Geology Section
Source: U-9235, 29 Nov 1956

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

15-1957-7-9016

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7, p 25 (USSR)

AUTHOR: Rauzer-Chernousova, D. M.

TITLE: On the Lowest Taxonomic Unit in Foraminifer Classification (O nizshykh taksonomicheskikh yedinitsakh v sistematike foraminifer)

PERIODICAL: Vopr. mikropaleontologii, vol 1, Moscow, AN SSSR, 1956, pp 5-22

ABSTRACT: The evaluation of the systematic significance of morphological and biological features of species and intraspecific forms must be made with due consideration to all the basic criteria--morphological, ontophylogenic, biological, geographical, geochronological, and economic. Foraminifers generally occur in great numbers in definite ecological habitats, and they are commonly buried near where they lived; thus a group of individuals from a thin layer may more or

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APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

15-1957-7-9016

On the Lowest Taxonomic Unit in Foraminifer Classification (Cont.)

less reflect the population content. Specific criteria in zoology are considered to be 1) the sum of morphological differences resulting from the long period of interaction between the organism and the external environment; 2) morphological discontinuities between similar species; 3) hereditary transmission to descendents of specific features; 4) psycho-physiological isolation; 5) the independent faunal realm; and 6) intra- and interspecific relationships. Paleontologists have not been able to use the fourth and sixth criteria. The hereditary transmission of features to subsequent generations is reflected in an intensification of the features, in a limitation of size, and in an individual direction of change. The time criterion is very important for the paleontologist; the period when the species lived must be determined on the geological time scale. But the duration of life and the extent of the faunal realm cannot be determined at the moment of identifying the species, only after the accumulation of considerable data. Fundamentally, speci-

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15-1957-7-9016

On the Lowest Taxonomic Unit in Foraminifer Classification (Cont.)

fic criteria as conceived in zoology are both acceptable and sufficient for the differentiation of species in paleontology. Of the intraspecific categories only one has been accepted: the subseries. Its criteria are 1) a small number of distinguishing features which have arisen from the interaction of the organism and the total physico-geographic factors; 2) the presence, in contiguous zones, of forms transitional to the next species or with insignificant interruption; 3) the relative stability of different morphological characteristics; 4) a definite faunal realm, which may, however, be adjacent to faunal realms of other subspecies; and 5) the total absence of extremely faint indication of psychophysiological isolation. In addition, there are three supplementary criteria in paleontology: 1) variability, generally in a definite direction and with limiting magnitude; 2) stratigraphic separation, with transitional forms in adjacent layers; and 3) a close phylogenetic relationship of forms in vertical sequence, with less difference between links than is found in

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On the Lowest Taxonomic Unit in Foraminifer Classification (Cont.) 15-1957-7-9016

species. Investigations of foraminifers have indicated that it is also necessary to differentiate varieties. As data accumulate, some varieties pass into the category of subspecies. Variety being to some degree a temporal and environmental category, it is necessary to accredit the variety category in paleontology, with the adjustment of this category of subseries, in keeping with the rules of zoological nomenclature. From the practice of collective studies of Paleozoic foraminifers it has been found that three fundamental premises are necessary for the rapid performance of such investigations: 1) a uniform concept of the extent of the species; 2) a wide regional investigation; and 3) uniform divisions of the stratigraphic system.

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L. Sh. Davitashvili

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RAUZER-CHERNOUSOVA, D.M.

Lower taxonomic units in the systematics of Foraminifera.
Vop.mikropaleont. no.1:5-22 '56. (MLRA 9:12)

1. Geologicheskiy institut Akademii nauk SSSR.
(Foraminifera, Fossil)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M., doktor geologo-mineralogicheskikh nauk.

Coordination of micropaleontological studies (conference in Moscow). Vest. AN SSSR 26 no.9:105-106 S '56. (MLRA 9:11)
(Foraminifera)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

Disagreement with the description of Borelis princeps Ehrenberg, 1854 as a species typical of the genus Schwagerina Moeller, 1877. Dokl. AN SSSR no.6:1333-1335 D '56. (MLRA 10:3)

1. Geologicheskiy institut Akademii SSSR. Predstavleno akademikom N.S. Shatskim.

(Foraminifera, Fossil)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

KAUZER-CHERNOUSOVA, D.M.

11-11-8/9

AUTHOR: Rauzer-Chernousova, D.M. and Reytlinger, Ye.A.

TITLE: Development of Foraminifera During the Paleozoic Era and Their Stratigraphical Importance (Razvitiye foraminifer v paleozoyskoye vremya i ikh stratigraficheskoye znacheniye)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957, # 11, p 103-124 (USSR)

ABSTRACT: Approximately 300 genera and 3,000 species of Paleozoic foraminifera are known at the present time. The number of these fossils, which are of great stratigraphic importance for the Upper and Lower Paleozoic era, is steadily increasing. Intensive studies were conducted during the past 30 years, whereby the extensive material was submitted by a very limited number of scientists. The card catalog of the Laboratory for Microfauna of the Geologic Institute of the AN USSR (Laboratoriya mikrofauny geologicheskogo instituta AN SSSR) contains 8,300 cards, and lists almost all published forms of these fossils. The author mentions the difficulties arising from the different methods applied in micropaleonthologic research in different countries, rendering comparisons very difficult. The author gives a detailed review of the genetic development of foraminifera during the Paleozoic era (from the Cambrian to the

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...ed at that time. From all
...pressions of foraminifera are found

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11-11-8/9

Development of Foraminifera During the Paleozoic Era and Their Stratigraphical Importance

in Carboniferous deposits of shallow Paleozoic sea basins. This fact obliges the Soviet micropaleontologists to intensify their studies on Paleozoic foraminifera located within the European part of the USSR to solve problems of systematics, ecology and stratigraphic importance of foraminifera. There are 1 table, 3 figures and 45 references, of which 28 are Slavic.

ASSOCIATION: Laboratory for Micro-Fauna of the Geologic Institute, AN SSSR (Laboratoriya mikrofauny geologicheskogo instituta AN SSSR)

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RAUZER-CHERNOUSOVA, D.M.; REYTLINGER, Ye.A.

Development of Foraminefera in the Paleozoic and their stratigraphic significance. Izv. AN SSSR Ser. geol. no.11:103-124 N '57. (MLRA 10:11)
(Foraminifera, Fossil)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

Superfractional dissection of upper Carboniferous sediments in the area of the Kuybyshev Hydroelectric Power Station. Trudy GIN no.13:121-138 '58. (MIRA 11:9)

1. Geologicheskiy institut AN SSSR.
(Kuybyshev District--Palentology)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.; SHCHERBOVICH, S.F.

Schwagerina beds in the central part of the Russian Platform.
Trudy GIN no.13:3-56 '58. (MIRA 11:9

1. Geologicheskiy institut AN SSSR.
(Russian Platform--Paleontology)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

MIKLUKHO-MAKLAY, A.D.; RAUZER-CHERNOUSOVA, D.M.; ROZOVSKAYA, S.Ye.

Systematics and phylogeny of fusulinids. Vop.mikropaleont. no.2:5-21 '58. (MIRA 11:12)

1. Leningradskiy gosudarstvennyy universitet i Geologicheskiy i Paleontologicheskiy instituty Akademii nauk SSSR.
(Foraminifera, Fossil)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

ORLOV, Yu.A., glavnyy red.; RAUZER-CHERNOUSOVA, D.M., otv.red.toma; FURSENKO, A.V., otv.red.toma; MARKOVSKIY, B.P., zam.glavnogo red.; RUZHENTSEV, V.Ye., zam.glavnogo red.; SOKOLOV, B.S., zam.glavnogo red.; VAKHRAMEYEV, V.A., red.; GEKKER, R.F., red.; GROMOVA, V.I., red.; DAVITASHVILI, L.Sh., red.; KRYMGOL'TS, G.Ya., red.; LUPPOV, N.P., red.; OBRUCHEV, D.V., red.; OVECHKIN, N.K., red.; POKROVSKAYA, I.M., red.; PCHELINTSEV, V.F., red.; RADCHENKO, G.P., red.; RODENDORF, B.B., red.; ROZHDESTVENSKIY, A.K., red.; SARYCHEVA, T.G., red.; SUBBOTINA, N.N., red.; TAKHMADZHAN, A.L., red.; FLEROV, K.K., red.; KHABAKOV, A.V., red.; CHERNYSHEVA, N.Ye., red.; EBERZIN, A.G., red.; KOTLYAREVSKAYA, P.S., red.izd-va; MOSKVICHEVA, N.I., tekhn. red.; POLENOVA, T.P., tekhn.red.

[Fundamentals of paleontology; reference book in fifteen volumes for paleontologists and geologists of the U.S.S.R.] Osnovy paleontologii; spravochnik dlia paleontologov i geologov SSSR v piatnadtsati tomakh. Moskva, Izd-vo Akad.nauk SSSR. Vol.1. [General part. Protozoa] Obshchaia chast'. Prosteishie. Otv.red. D.M.Rauzer-Chernousova, A.V.Fursenko. 1959. 481 p. (MIRA 12:7)
(Protozoa, Fossil)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

Colloquium on the micropaleontological foundation of stratigraphic schemes for Mesozoic deposits of the Russian Platform. Paleont. zhur. no.1:148 '59. (MIRA 13:1)
(Russian Platform--Paleontology, Stratigraphic)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

KRASHENNIKOV, Valeriy Arkad'yevich; RAUZER-CHERNOUSOVA, D.M.; PECHENYUK, I.L., red.izd-va; RYLINA, Yu.V., tekhn.red.

[Elphidiids from Miocene deposits of Podolia] El'fidiidy miotsenovykh otlozhenii Podolii. Moskva, Izd-vo Akad.nauk SSSR, 1960. 139 p. (Akademiia nauk SSSR. Geologicheskii institut. Trudy, no.21). (MIRA 13:5)
(Podolia—Foraminifera, Fossil)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

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RAUZER-CHERNOUSOVA, D.M.

ORLOV, Yu.A., glavnyy red.; MARKOVSKIY, B.P., zam.glavnogo red.; RUZHENTSEV, V.Ye., zamestitel' glavnogo red.; SOKOLOV, B.S., zamestitel' glavnogo red.; EBERZIN, A.G., otv.red.toma; KIPARISOVA, L.D., red.; SHIMANSKIY, V.N., red.; VAKHRAMEYEV, V.A., red.; GEKKER, R.F., red.; GROMOVA, V.I., red.; DAVITASHVILI, L.Sh., red.; KRYMGOL'TS, G.Ya., red.; LUPPOV, N.P., red.; OBRUCHEV, D.V., red.; OVECHKIN, N.K., red.; POKROVSKAYA, I.M., red.; PCHELINTSEV, V.F., red.; RADCHENKO, G.P., red.; RAUZER-CHERNOUSOVA, D.M., red.; ROMENDORF, B.B., red.; ROZHDESTVENSKIY, A.K., red.; FLEROV, K.K., red.; FURSENKO, A.V., red.; KHABAKOV, A.V., red.; CHERNYSHEVA, N.Ye., red.; KORDE, K.B., red.izd-va; POLENOVA, T.P., tekhn.red.

[Fundamentals of paleontology; reference book in 15 volumes for paleontologists and geologists of the U.S.S.R.] Osnovy paleontologii; spravochnik dlia paleontologov i geologov SSSR v piatnadtsati tomakh. Moskva, Izd-vo Akad.nauk SSSR. Vol.3. [Mollusks: Loricata, Bivalvia, Scaphopoda] Molliuski - pantsirnye, dvustvorchatye, lopatonogie. Otvet.red. A.G.Eberzin, 1960. 299 p. (Mollusks, Fossil) (MIRA 14:1)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

Historical development of fusulinids and the boundaries of stratigraphic subdivisions. Vop. mikropaleont. no.7:3-12 '63. (MIRA 17:10)

1. Geologicheskiy institut AN SSSR.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

LIPINA, O.A .; RAUZER-CHERNOUSOVA, D.M., otv. red.; PEYVE, A.V., akademik, glavnyy red.; KUZNETSOVA, K.I., red.; MENNER, V.V., red.; TIMOFEYEV, P.P., red.

[Taxonomy of Tournayellidae.] Sistematika turnejellid. Moskva, Nauka, 1965. 114 p. (Akademiia nauk SSSR. Geologicheskii institut. Trudy, no.130)
(MIRA 18:9)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.; MENNER, V.V., otv. red.; PEYVE, A.V., akademik, glavnyy red.; KUZNETSOVA, K.I., red.; TIMOFEYEV, P.P., red.

[Foraminifera in the stratotypical cross section of the Sakmara stage (Sakmara River, Southern Urals).] Foraminifery stratotipicheskogo razreza sakmarskogo iarusa (r. Sakmara, IUzhnyi Ural). Moskva, Nauka, 1965. 79 p. (Akademiia nauk SSSR. Geologicheskii institut. Trudy, no.135) (MIRA 18:9)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

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ANOSOVA, A.N.; BENSH, F.R.; GROZDILOVA, L.P.; DOBROKHOTOVA, S.V.; KALMYKOVA, M.A.; KIREYEVA, G.D.; LEBEDEVA, N.S.; MIKLUKHO-MAKLAY, A.D.; RAUZER-CHERNOUSOVA, D.M.; SHCHERBOVICH, S.F.

Revision of the taxonomy of the genus Schwagerina and genera close to it. Vop. mikropaleont. no.8:60-75 '64. (MIRA 18:5)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

Moment of arising of new species in the geological past. Paleont. zhur. no.4:3-9 '64. (MIRA 18:3)

1. Geologicheskiy institut AN SSSR.

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[illegible], D.M.

Stage sequence and periodicity in the historic development of fusulinids. Dokl. AN SSSR 160 no.[illegible] 165. (MIRA 18:2)

1. Geologicheskiy institut AN SSSR. Submitted September 29, 1964.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

SOLOV'YEVA, Mariya Nikolayevna; RAUZER-CHERNOUSOVA, D.M., doktor geol.-mineral.nauk, otv.red.; PEYVE, A.V., glavnyy red.; MARKOV, M.S., red.; MENNER, V.V., red.; TIMOFEYEV, P.P., red.; KOTLYAREVSKAYA, P.S., red.izd-va; NOVICHKOVA, N.D., tekhn.red.; KASHINA, P.S., tekhn.red.

[Stratigraphy and the zone of fusulinids of Middle Carboniferous sediments in Central Asia] Stratigrafiia i fuzulinidovye zony srednekamennougol'nykh otlozhenii Srednei Azii. Moskva, Akad. nauk SSSR. 1963. 132 p. fold. diagrs. inserted. (Akademiia nauk SSSR. Geologicheskii institut. Trudy, no.76). (MIRA 16:10)

1. Chlen-korrespondent AN SSSR (for Peyve).

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RAUZER-CHERNOUSOVA, D.M., doktor geol.-mineral.nauk

Conference on the Coordination of Research on Micropaleontology, held at Moscow. Vest. AN SSSR 33 no.7:115 Jl '63. (MIRA 16:8)
(Micropaleontology, Stratigraphic)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

BOGDANOVICH, A.K.; RAUZER-CHERNOUSOVA, D.M.

Second colloquium on Maikop Foraminifera. Paleont.zhur. no.1:146-147 '63. (MIRA 16:4)

(Foraminifera, Fossil)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.; REYTLINGER, Ye.A.

Development of new forms in Foraminifera. Vop. mikropaleont. no.6:3-30 '62. (MIRA 15:11)

1. Geologicheskiy institut AN SSSR.
(Foraminifera, Fossil)
(Evolution)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

Boundary between Vereya and Kashira beds of the Middle Carboniferous in the Volga-Ural oil-bearing province. Biul.MOIP.Otd.geol. 37 no.2:85-102 Mr-Ap '62. (MIRA 15:7)
(Volga-Ural region--Geology, Stratigraphic)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

SEMINA, S.A.; RAUZER-CHERNOUSOVA, D.M., otv.red.; CHEPIKOVA, I.M., otv.red.; KUZ'MIN, F.I., tekhn.red.

[Stratigraphy and Foraminifera (Fusulinidae) of the Schwagerina beds in the Oka-Tsna uplift] Stratigrafiia i foraminifery (fuzulinidy) shvagerinovogo gorizonta Oksko-TSninskogo podniatiia. Moskva, Izd-vo Akad.nauk SSSR, 1961. 72 p. 5 plates. (Akademiia nauk SSSR. Geologicheskii institut. Trudy, no.57). (MIRA 15:5)
(Oka Valley--Geology, Stratigraphic)
(Oka Valley--Foraminifera, Fossil)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

Session of the Geological Society of France devoted to the ontogeny of invertebrates. Paleont.zhur. no.1:166-169 '61. (MIRA 14:8)

1. Geologicheskiy institut AN SSSR.
(Invertebrates--Congresses) (Ontogeny)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZER-CHERNOUSOVA, D.M.

Revision of the genus Schwagerina and allied genera and the boundary between the Carboniferous and the Permian. Vop. mikropaleont. no.4: 3-32 '60. (MIRA 14:5)

1. Geologicheskiy institut Akademii nauk SSSR.
(Foraminifera, Fossil)

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

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

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

(Volga Valley—Paleontology, Stratigraphic)
(Kama Valley—Paleontology, Stratigraphic)

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MENNER, V.V., otv.red.; POKROVSKAYA, I.M., red.; RAUZER-CHERNOUSOVA, D.M., red.; SUBBOTINA, N.N., red.; FURSENKO, A.V., red.; ABKEVICH, P.L., red.izd-va; IVANOVA, A.G., tekhn.red.

[Pre-Quaternary micropaleontology] Dochetvertichnaia mikropaleontologiia. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1960. 256 p. (Doklady sovetskikh geologov. Problema 6). (MIRA 13:11)

1. International Geological Congress. 21st, Copenhagen, 1960. (Micropaleontology--Congresses)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

ORLOV, Yu.A., glavnyy red.; MARKOVSKIY, B.P., zam.glavnogo red.; RUZHENTSEV, V.Ye., zam.glavnogo red.; SOKOLOV, B.S., zam.glavnogo red.; SARYCHEVA, T.G., otv.red.toma; VAKHRAMEYEV, V.A., red.; GEKKER, R.F., red.; GROMOVA, V.I., red.; DAVITASHVILI, L.Sh., red.; KRYMGOL'TS, G.Ya., red.; LUPPOV, N.P., red.; OBRUCHEV, D.V., red.; OVECHKIN, N.K., red.; POKROVSKAYA, I.M., red.; PCHELINTSEV, V.F., red.; RADCHENKO, G.P., red.; [redacted], red.; RODENDORF, B.B., red.; ROZHDESTVENSKIY, A.K., red.; SUBBOTINA, N.N., red.; TAKHTADZHAN, A.L., red.; FLEROV, K.K., red.; FURSENKO, A.V., red.; KHABAKOV, A.V., red.; CHERNYSHEVA, N.Ye., red.; EBERZIN, A.G.; NEVESSKAYA, L.A., red.izd-va; POLENOVA, T.P., tekhn.red.

[Fundamentals of paleontology; manual in fifteen volumes for paleontologists and geologists of the U.S.S.R.] Osnovy paleontologii; spravochnik dlia paleontologov i geologov SSSR v piatnadtsati tomakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. Vol.7. [Polyzoa, Brachiopoda. Supplement: Phoronidea] Mshanki, brakhiopody. Prilozhenie: Foronidy. Otvet.red.T.G. Sarycheva. 1960. 342 p. plates. (MIRA 14:4)
(Polyzoa, Fossil) (Brachiopoda, Fossil)
(Phoronidea, Fossil)

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KARAMZIN, A.P., inzh.; KISLYY, V.I., inzh.; MARINOV, A.M., inzh.; MIRENBURG, L.A., inzh.; RAUZIN, L.M., inzh.; SAGALOV, M.I., inzh.

The 110 kv. electric substation with a low-power transformer. Elek.sta. 32 no.8:49-54 Ag '61. (MIRA 14:10)
(Electric substations)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, L.M., inzh.

Heating oil-filled cutouts. Elek.sta. 28 no.10:91 '57. (MIRA 10:11)
(Electric cutouts)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, L.M., inzhener.

Simplifying the starting circuit for compensators. Elek.sta. 28 no.9:90-91 S '57. (MIRA 10:11)

(Electric substations)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, L.M., inzhener.

Heating up stator winding rods during generator repair. Elek.sta. 24 no. 5:53 My '53. (MLRA 6:7)
(Dynamos)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

IRANIY, P.B., inzh.; RAUZIN, L.M., inzh.

Increasing the electrodynamic stability of RVU-type high capacity disconnect switches by means of a magnetic terminal. Elek.sta.29 no.3:88-89 Mr '58. (MIRA 11:5)
(Electric switchgear)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, L.M., inzhener.

Locating the short-circuiting of a turbo-generator rotor on the body of the winding. Elek.sta. 24 no.11:54-56 N '53. (MLRA 6:11)
(Dynamos) (Short circuits)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, L.M.

AID P - 3256

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 11/25

Authors : Karamzin, A. P., Ya. S. Kolin, A. M. Marinov, and L. M. Rauzin, Engs.

Title : Experience with putting transformers into service without preliminary drying out

Periodical : Elektrichestvo, 9, 60-62, S 1955

Abstract : The authors discuss an article by A. K. Ashryatov "Putting transformers into serive without preliminary drying out" (This journal, Sept. 1955, pp. 44-54) and operational circular 3/E of the Ministry of Electric Power Stations. They maintain that A. K. Ashryatov's criticism of the circular is not confirmed by their own operational experience. Since 1951 they have applied in one of the power systems the methods recommended by the circular and have introduced into serive fifteen 110-kv, 7.5- to 31.5-thousand kw power transformers with most satisfactory results. The authors discuss

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AID P - 3256

Elektrichestvo, 9, 60-62, S 1955

Card 2/2 Pub. 27 - 11/25

critically some of Ashryatov's statements on: 1) local and surface moisture of transformer insulation in connection with their storing and transporting; 2) existing criteria of estimating the degree of moisture; and 3) the coordination of methods of testing to be made at the factory and at the place of assembly.

Institution : Main Administration of Ural Power Systems (Glavuralenergo)

Submitted : My 14, 1955

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, Yakov Rafailovich

Deputy Ch. Designer, State Bearing Plant, No. 3, -1943-. Mbr., Central Inst. of Bearings Ind., -c1948-. "Variations in the Physical Properties and Structure of Annealed Hypereutectic Steel as Fundamentals of Magnetic Regulating Methods," Zavod. Lab., 14, No. 7, 1948. Stalin 1st Prize, 1942, bearings.

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CA

Change of the physical properties and structures of annealed hypereutectoid steels as the basis of magnetic methods of control. Ya. R. Rauzin and Sh. R. Zheleznyakova. *Zavodskaya Lab.* 14, 817-23(1948).—The dependence of the magnetic properties of annealed Cr-C steel (Sh kh 15) on the size, form, and distribution of carbides and on the ferrite grain size was studied in order to be able to use magnetic properties in controlling the annealing of this steel. The specimens were 6 mm. in diam. and 215 mm. long and were made of steel contg. C 1.02, Cr 1.48, Mn 0.36, Si 0.28%. They were normalized at 980° and cooled rapidly enough to prevent the formation of a carbide network. Various structures such as lamellar and granular pearlite and network carbide were obtained by further heat-treatment. The magnetic properties were detd. by the ballistic method with a max. field of 500 oersteds. The coercive force doubled as the no. of carbide particles increased from about 400 × 10⁹ to 2000 × 10⁹ per cu. mm. A linear relation between Brinnel hardness, and permeability or coercive force was found regardless of the presence of a carbide network. Fine-grained ferrite produced about 10% higher coercive force and hardness and lower permeability than did a coarse-grained structure. Total carbide surface was also almost linearly related to hardness and the two magnetic properties. When fine pearlite of a normalized steel was coarsened by slow cooling from above 780°, the coercive force was decreased by about 50% and the permeability was increased by about a factor of 3.

A. G. Guy

Cent. Inst. of the Bearing Industry.

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PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 341 - I

Call No.: TN672.V8

BOOK

Author: RAUZIN, YA. R.

Full Title: INFLUENCE OF HOT DEFORMATION ON DECOMPOSITION OF SOLID SOLUTIONS AND STRUCTURAL FORMATIONS IN STEEL

Transliterated Title: Vliyaniye goryachey deformatsii na raspad tverdogo rastvora i obrazovaniye struktury v stali

Publishing Data

Originating Agency: All-Union Scientific Engineering and Technical Society of Machine Builders. Urals Branch

Publishing House: State Scientific and Technical Publishing House of Machine Building Literature ("Mashgiz")

Date: 1950 No. pp.: 15 No. of copies: 3,000

Text Data

This is an article from the book: VSESOYUZNOYE NAUCHNOYE INZHENERNO-TEKHNICHESKOYE OBSHCHESTVO MASHINOSTROITELEY. URAL'SKOYE OTDELENIYE, THERMAL TREATMENT OF METALS - Symposium of Conference (Termicheskaya obrabotka metallov, materialy konferentsii) (p. 81-95), see AID 223-II

Coverage: The author describes the experimental set-up for the study of the effect of plastic deformation on the phase transformation of steel under different conditions. Specific interest is shown in the separation of ferrite and carbide

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Vliyaniye goryachey deformatsii na raspad tverdogo rastvora i obrazovaniye struktury v stali AID 341 - I

during continuous cooling, overcooling of austenite, separation of carbides from the solid solution, transformation of austenite to pearlite, formation of steel structure in the region of high temperatures, region of pearlite or troosite separation from deforming austenite.

The author presents diagrammatic schemes of the experimental set-up for loading and heating of specimens and measuring of their temperatures. 11 charts and 10 microphotographs.

Purpose: For scientific workers
Facilities: None
No. of Russian and Slavic References: None
Available: Library of Congress.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, Ia. R.

Author: Rauzin, Ia. R.

Title: The thermal treating of chromium steel, for bearings and instruments. (Termicheskaia obrabotka khromistoi stali; dlia podshipnikov i instrumenta.)

City: Moscow 187 p.

Publisher: State Scientific and Technical Publication of the Machine Construction Literature

Date: 1950

Available: Library of Congress

Source: Monthly List of Russian Accessions, Vol. 4, No. 1, p. 27

EML. B-88741, 11 Oct. 55

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CA

Influence of the original grain on the conversion of pearlite to austenite. M. I. Manzhanikova and Ya. R. Rauzin (Central Inst. Bearing Ind., Moscow). *Zhur. Tekh. Fiz.* 20, 694-7(1950).—Steel with 1.02% C and 1.56% Cr was heat-treated so as to give 3 different states of spheroidized pearlite; the 1st 2 samples had the same ferrite grain size, but differed in the dispersity of the carbide, whereas the 2nd and 3rd sample had the same carbide grain size, but different ferrite grain sizes. The conditions of heat treatment, and the dispersities of ferrite and carbide, were (I) 775°, fine, fine, (II) 775° (+100 hrs. at 710°), fine, coarse, (III) 850° (+100 hrs. at 710°), coarse, coarse. At 700°, the rate of conversion of pearlite to austenite is greatest in I, smaller in II and III. At 705°, the rates are somewhat slower, but decrease in the same order. The rates of production of nuclei of austenite grains (by micrography) are const., and decrease from I to III; the first nuclei appear in II later than in I, and in III later than in II. The rate of growth of austenite crystals is greatest in I, but equal in II and III. In spheroidized pearlite, nuclei of austenite originate only at the boundaries of ferrite grains. In lamellar pearlite, new nuclei are formed only at boundaries of former pearlite colonies. N. Thon

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, Ya. R., ZHELEZNYAKOVA, Sh. R.

Steel

One method of aging hardened steel. Vest. mash. 31, No. 11, 1951

Monthly List of Russian Accessions, Library of Congress. September 1952. Unclassified.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014443

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, YA. R.

Steel - Heat Treatment

Tempering steel from forging heat, Vest. mash., 32, no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952 Uncl.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

TN757.C5R3 TREASURE ISLAND BOOK REVIEW AID 844 - M

RAUZIN, YA. R.

TERMICHESKAYA OBRABOTKA KHROMISTOY STALI (DLYA PODSHIPNIKOV I INSTRUMENTA) (Heat Treatment of Chromium Steel for Bearings and Tools). Edited by M. N. Kunyavskiy, Kand. of Tech. Sci. Moscow, 1955. Second, enlarged edition. 300 p., 6,000 copies printed.

ANALYSIS AND EVALUATION:

This book is intended to help metallurgists, designers, technicians and heat-treatment shop specialists in the development and practice of the processing of chromium steels. The author presents contemporary theories and technical achievements in the heat-treatment of chromium steels, particularly those used in manufacture of bearings and high-speed tools. In the bearing manufacturing industry, a special group of chromium steels, the ShKh6 to ShKh15 marks in the GOST standards, are most widely used. The ShKh15 steel is the most characteristic exponent of the group and therefore is described in the book with more detail than the others. The heat treatment methods for the high-chromium steels predominantly used in tool making are also discussed in the book. There are 267 drawings, graphs and pictures, 66 tables, many GOST standards and references to Russian scientists and technicians.

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RAUZIN, YA. R., Termicheskaya . . . AID 844 - M

Chapter I. "Hypereutectoid Chromium Steels" (p. 5-21) their composition and use in the machine-building industry; steels used for ball and roller bearings (ShKh6, ShKh9, ShKh15 and ShKh15SG marks) and for tools (9Kh, Kh, Kh09, Kh05 and KhG marks). (Other are steels referred to in tables and throughout the book); influence of chromium on properties of hypereutectoid steel; influence of manganese.

Chapter II. "Mechanical Heat Treatment" (p. 22-34). General requirements of treatment of blanks; methods of heating up, significance of speeds and temperatures applied in heating up, and importance of proper cooling of the forged pieces. (Equipment and methods of heating up are not given in this book, but reference is made to special literature on the subject).

Chapter III. "Normalizing Forgings and Hot-rolled Steel" (p. 35-47). Defects to be corrected by normalization (19 pictures of steel microstructure and 2 tables).

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RAUZIN, YA. R., Termicheskaya . . . AID 844 - M

Chapter IV. "Annealing of Forgings" (p. 48-73). Designation, speed, temperature and duration of heating; cooling speed; isothermic annealing; annealing of balls; influence of annealing on processability of chromium steel; practical methods of annealing; defects in annealing; laminated perlites and heterogenous coarse-grained perlite; carbide network; non-conformity with technical requirements.

Chapter V. "Normalizing Tempered Steel" (p. 74-76).

Chapter VI. "Influence of Original Steel Structure on Structure and Properties of Hardened Steel" (p. 76-123). Conversion of perlite into austenite. Influence of original structure on structure and properties of composition of solid solution: grain size, composition of solid solution, structure of hardened steel. Mechanical properties of hardened steel and influence of the original structure: on toughness, strength and resilience, resistance to wear, resistance to continuous load changing, ductility, fatigue of the surface layer of the hardened steel. Influence of original steel structure on hardening technique: permissible limits of hardening temperatures, fissuring in hardening. Selection of original steel structure for practical purposes.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, YA. R., Termicheskaya . . . AID 844 - M

Chapter VII. "Hardening of Hypereutectoid Chromium Steel" (p. 124-221). Heating: speed, temperatures and soaking. Cooling: critical speed in hardening, conversion of austenite into martensite, cooling liquids (coolants). Shop practice in hardening of rollers and balls (IGPZ conveyer-type hardening and tempering installation, K-130 electric hardening furnace, OKB-134 electric furnace with pulsating sole). Hardening bulky articles, railroad and larger bearings (600 to 1200 mm diam.); gradual hardening of thin articles; isothermic hardening. Hardening bearing-type steel by induction heating. This section was written by A. G. Spector, Kand. of Tech. Sci. The NIITVCh (Scientific Research Institute of High Frequency Current) installation for induction heating of rings. Hardening combined with semi-hot stamping. Defects in hardening process and preventive measures: warping, change in dimensions without changing outside form, discrepancy in structure and hardness of steel, fissuring, soft spots and decarbonization.

Chapter VIII. "Tempering Hardened Hypereutectoid Chromium Steel" (p. 222-232). (The OKB - Special Design Office 152 electric tempering furnace).

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RAUZIN, YA. R., 'ermicheskaya . . .

Chapter IX. "Stabilization of Sizes of Hardened Articles" (p. 233-252). Tensile stress stabilization, stabilization of martensite, and stabilization of residual austenite.

Chapter X. "Heat Treatment of Stamps and Tools" (p. 253-267). Stamping tools for cold stamping (the OKB - Special Design Office - 174A electric furnace, and gas furnace used for such heat treatment); equipment and machine parts, measuring instruments and cutting tools.

Chapter XI. "High-Chromium Steels and Their Heat Treatment" (p. 268-296). Chemical composition; forging, tempering, hardening, annealing, cold treatment heat treating features in processing tools; refined multiple annealing (the OKB - Special Design Office - 194 electric furnace for annealing chromium steels).

The bibliography contains 95 Russian references, 8 non-Russian (1926-1953.

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RAUZIN, Ya R

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The First Stage in the Plastic Deformation of Polycrystalline Metals and the Influence of Grain-Size. I.—Aluminium. II.—Iron. Ya. R. Rauzin and A. R. Zheleznyakova (*Fizika Metallov i Metallovedenie*, 1956, 3, (1), 146–153; 154–161).—[In Russian]. [I.—] The first stage of deformation of polycryst. Al is by grain-boundary movement of whole grains over each other. The next stage is by deformation of individual grains by slip. The limiting strain at which grain-boundary movement gives way to slip depends on the conditions of the deformation, compn. of the grain-boundary layer, and grain-size; slower deformation, higher temp., and smaller grains move the limit to higher strains; purer metal and larger grains move the limit to lower strains or even zero strain. R. and Z. discuss the mechanism of the two types of deformation. There must be an optimum grain-size for optimum strength (resistance to deformation); this optimum is the limiting grain-size at which grain-boundary deformation gives way to slip. By direct measurement R. and Z. find that for deformation at 0·1%/hr. at 140° C. the optimum grain-size is ~0·9 mm. for 99·5% and ~0·4 mm. for 99·9% Al. [II.—] R. and Z. attempt the same methods for Fe, but the situation is much more complex and they are unable to sum up the results as they did for Al. As for Al, there is a limiting deformation at which slip lines first appear, and this depends on grain-size according to a law of the form log(grain dia.) = const. × deformation. The const. is < 0 and, e.g. for single crystals of commercial-purity Fe, slip bands first appear at ~0·1% elongation. The effect of grain-size on plasticity (extension for given stress) is summed up by the rule—any factor which reduces the ability of the Fe to deform by grain-boundary movement, reduces plasticity. 16 ref.—A. F. B.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

129-12-6/11

AUTHORS: Rauzin, Ya. R., Candidate of Technical Sciences and Zheleznyakova, A. R., Engineer.

TITLE: Nature of the critical degree of deformation. (Priroda kriticheskoy stepeni deformatsii).

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1957, No.12, pp.41-48 (USSR)

ABSTRACT: In earlier investigations of the recrystallisation of the steel ШХ15 the authors observed merging of grains after small degrees of deformation in the hot state and on the basis of these observations they formulated a hypothesis that only selective recrystallisation takes place in the critical range of deformation. In this paper the authors investigated recrystallisation after small plastic deformations of aluminium of various degrees of purity for differing initial grain sizes from a monocrystal onwards down to a fine grain of 0.06 mm size. The starting material consisted of aluminium wire of two differing degrees of purity (99.46% Al, 0.14% Fe, 0.25% Si, 0.15% other admixtures; and 99.90% Al, 0.02% Fe, 0.04% Si, 0.04% other admixtures). By annealing at various temperatures specimens with differing grain sizes were produced from this material. Deformation was effected by

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uniaxial tension on 2 x 3 x 20 mm specimens. All the specimens were electrically polished and then stretched to various degrees of deformation with elongations up to 20%. Appearance of sliding lines was observed microscopically on the polished surface and also the formation and growth of grains during subsequent recrystallisation. Fig.1 shows photos of the first visible traces of sliding in a monocrystal and a polycrystal; Fig.2 shows the crystallographic orientation of a monocrystal respectively after deformation by 14% and deformation by 14% followed by annealing at 400°C; the graphs, Fig.3, show the degree of deformation at which sliding lines appear; the graph, Fig.4, gives the recrystallisation curves for aluminium with initial grain sizes of 0.8 and 0.06 mm respectively; the graph, Fig.8, shows the recrystallisation curve after slow deformation at 140°C at a rate of 1% per 10 hours, annealing temperature of 600°C and initial grain diameter of 0.06 mm. The same graph also shows a recrystallisation curve after usual deformation speeds. On the basis of their experimental results, the authors arrived at the following conclusions: existence of a critical degree

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Nature of the critical degree of deformation. 129-12-6/11

of deformation and of an intensive grain growth during annealing can be elucidated on the basis of the following conceptions relating to the mechanism of the initial stage of deformation. The initial stage of plastic deformation of polycrystalline metals, particularly of aluminium, are characterized by inter-granular displacement. Whether during this displacement any intra-granular processes take place cannot be said for the time being, since it was only established that no sliding processes take place during this displacement. Only after reaching a certain limit do the inter-granular displacements change into sliding deformation which comply with the well known relations. In the case of purer metals and also with increasing grain sizes, the inter-granular displacement changes into intragranular (sliding) at lower degrees of deformation. With slowing down deformation, this boundary shifts appreciably towards large degrees of deformation. Displacement of the grains, which is accompanied by their getting nearer and by densification of the transient layer without distorting appreciably the atomic packing, will lead at a

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

Nature of the critical degree of deformation. 129-12-6/11

certain stage to intensive grain growth during subsequent annealing; this stage is the critical deformation at which a transition begins from selective recrystallisation to treatment recrystallisation which approaches the boundary of transition from intergranular to sliding displacement. At low deformation speeds (creep) an interval of critical deformation is observed; the two limits of the critical deformation, i.e. formation of a closed contact of the grains and subsequent hardening of the transient layer and wedging of the grain can be ordinated as follows: the first corresponds to the beginning of the interval of critical deformation, whilst the second corresponds to the end of this interval. The wedging of the grains and the accompanying initial sliding deformation is accompanied by intensive distortions primarily in the transient layer along the grain boundaries which becomes sources of formation of new grains during subsequent heating and recrystallisation can already be observed. The described mechanism of the initial stage of deformation explains why new grains during recrystallisation form primarily along the grain boundaries. Other relations also become understandable, particularly, the strong dependence of the size of the recrystallised

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Nature of the critical degree of deformation. 129-12-6/11

grain on the initial one and the shift in the recrystallisation peak, i.e. of the critical degree of deformation, towards small deformation values with a coarsening of the initial grain.
There are 8 figures and 7 references, 5 of which are Slavic.

AVAILABLE: Library of Congress.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

RAUZIN, YA. R.

129-1-9/14

AUTHOR: Rauzin, Ya.R., Candidate of Technical Sciences.

TITLE: Influence of Preliminary Work-hardening on the Initial Stage of Plastic Deformation and Recrystallisation of Iron (Vliyaniye predvaritel'nogo naklepa na nachal'nuyu stadiyu plasticheskoy deformatsii i rekristallizatsiyu zheleza)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, No.1, pp. 38 - 42 (USSR).

ABSTRACT: In Fig.1, p.39, the recrystallisation curves are graphed of commercially-pure iron subjected to forging from 40 down to 15 mm, followed by normalising at 900 °C (Curve 1), and for specimens cut out of hot-rolled rods, initial grain sizes being equal in both cases. According to earlier work of the author [Refs. 1 and 2], there is a great difference between the two curves in as much that, in the case of the critical degree of deformation being reached, the grain growth of the rolled metal exceeds the grain growth of the forged metal. Furthermore, the degree of deformation of the rolled metal shifts towards smaller deformations, i.e. selective recrystallisation proceeds considerably more easily and more intensively. To elucidate the hereditary effect of the texture, the author has investigated separately the influence of the degree of deformation, which

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129-1-9/14

Influence of Preliminary Work-hardening on the Initial Stage of Plastic Deformation and Recrystallisation of Iron.

determines the character and the degree of perfection of the texture, and also the influence of the grain size at the initial stage of plastic deformation. For this purpose, the tensile curves and recrystallisation of commercial iron were studied. The iron was preliminarily annealed at 1 000 °C for 6 hours (cooled in the furnace) and then subjected to cold-rolling with reductions of 18, 38.5, 55 and 72.5%; the average size of the initial grain was 0.23 - 0.24 mm. For obtaining various grain sizes, the blanks were annealed at 600, 750 and 900 °C for 4.5 hours. After annealing, flat specimens were produced of a width of 5 mm and a length of 60 mm. The specimens were subjected to tension whereby the degree of deformation varied from 0 to 15%. For a part of the specimens, the yield point and the size of the "yield point surface" were measured and then the specimens were subjected to recrystallisation annealing in vacuum for 16 hours at 750 °C and the tendency for the grain to grow was determined. The results of the experiments are described and graphed. Fig.2 shows the influence of the degree of initial deformation on the grain size; Fig.3 shows the dependence of the yield point on the grain size. Fig.4 shows

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444

129-1-9/14

Influence of Preliminary Work-hardening on the Initial Stage of Plastic Deformation and Recrystallisation of Iron.

the influence of the degree of initial deformation on the size of the "yield point surface"; Fig.5 shows the dependence of the magnitude of the "yield point surface" on the grain size for various degrees of initial deformation; Fig.6 shows the dependence of the critical degree of deformation on the magnitude of the initial work-hardening; Fig.7 shows the dependence of the critical degree of deformation on the real grain size; Fig.8 shows the dependence of the critical degree of deformation on the initial grain size. On the basis of the here obtained results, it was found that the initial plastic deformation of commercial iron retains its influence on a number of properties of the metal in spite of intermediate annealing, which brings about a uniform micro-structure. This applies particularly to the tendency of the grain to grow and to the magnitude of the critical deformation; with increasing initial plastic deformation and, consequently, with increasing degree of perfection of the texture, the grain size in the critical interval will increase rapidly after recrystallisation, in spite of equal initial grain size; the critical range will shift towards low degrees of deformation. The value of the yield point and the

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129-1-9/14

Influence of Preliminary Work-hardening on the Initial Stage of Plastic Deformation and Recrystallisation of Iron.

size of the "yield point surface" depend on the initial deformation since it influences the size of the grain after annealing; a direct relation with the degree of initial deformation has not been established. The author does not consider correct the explanation, given by M. Monflard and P. Lacombe [Ref.11] and M.G. Lozinskiy and S.I. Antipova [Ref.12], of the influence of the initial hot or cold working by applying pressure on the tendency of a steel grain to grow; in elucidating the effect of the initial plastic deformation, it is necessary to evaluate the hereditary role of changes in the metal structure. The initial plastic deformation influences the solubility of admixtures and of disperse, non-metallic particles on which the tendency to grain growth depends; changes in the structure of the metal also have a considerable influence on the tendency of grains to grow.
There are 8 figures and 12 references, 8 of which are Slavic.

ASSOCIATION: Central Institute of Railway Transportation (Tsentral'nyy Institut Zheleznodorozhnogo Transporta)

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Rauzin, Ya. R.

129-4-11/12

AUTHOR: Rauzin, Ya. R., Candidate of Technical Sciences.

TITLE: On the recrystallisation of deformed metals and alloys. (O rekristallizatsii deformirovannykh metallov i splavov).

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, No.4, pp. 52-60 (USSR).

ABSTRACT: This is a detailed review of Western information dealing with the following: the deformed state; recrystallisation of deformed single crystals; recrystallisation of deformed polycrystals and critical degree of deformation; germination of new centres of recrystallisation; kinetics of recrystallisation; influence of admixtures in the metal on the recrystallisation; influence of the initial grain; influence of the nature of the deformation.
There are 8 figures and 51 references - 13 Russian, 25 English, 10 German, 3 French.

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129-58-8-2/16

AUTHOR: Rauzin, Ya. R., Candidate of Technical Science

TITLE: Refining of the Grain During High Temperature Heating (Izmel'cheniye zerna pri vysokotemperaturnom nagreve)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 7, pp 14-17 (USSR) + 1 plate

ABSTRACT: The authors describe the refining of the grain observed during high temperature heating of commercially pure (99.5%) aluminium. In the case of ordinary heating of aluminium wire (cold drawn, annealed at 300°C, grain size 0.068 mm) a continuous growth of the grain was observed. The average grain size was 0.12 mm at 400°C, 0.81 mm at 600°C. In the case of very slow heating (5°C/hr) the average grain size increases to 0.14 mm at 400°C and 0.92 mm at 600°C (Fig.1, plate facing p 24). Entirely different relations are obtained if very large grains are heated. In the given case, the coarse grain was produced by critical work hardening (3.6 to 3.7% deformation) and subsequent annealing. It was found that in the case of rapid high temperature heating of aluminium (400-600°C) the grain, which was artificially coarsened by heating to 400°C after preliminary critical deformation, will become

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129-58-8-2/16

Refining of the Grain During High Temperature Heating

finer. The refining of the grain is not associated with phase transformation, the observed refining of the grain is obviously due to thermal expansion of the crystals and the thus produced intensive pressure which leads to work hardening and subsequent recrystallisation. The deformation and the recrystallisation manifest themselves clearly when the absolute magnitude of the expansion of the grain is large enough; this takes place predominantly if there is simultaneously an originally large grain and a high temperature. Slow heating does not lead to a refining of the grain even in the case of an originally large grain size and an elevated temperature. This can be attributed to the fact that in the case of slow heating there is never time for relaxation phenomena to take place, which eliminate the effect of internal work hardening. The author concludes that heating, particularly rapid heating, produces in the volume of the polycrystalline specimen a stress field caused by a differing orientation of the grain, crystalline imperfections and local

Card 2/3 plastic deformation. One of the consequences of internal

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