"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, G.I.

Siberian pine forests of northern Omsk Province and prospects for growing Siberian pine under forest steppe conditions. Izv. Omsk. otd. Geog. ob-va. no.5:103-120 '63.

(MIRA 17:5)

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ZAYKOV, G.I.

USS /Forestry - Biology and Typology of the Forest. K-2

Abs Jour : Ref Zhur - Biol., No 2, 1958, 5859

Author : Zaykov, G.I.

Inst : Povol'zhskiy Forest Engineering Institute.

Title : Some Characteristics of the Fruit Production of Oak Trees in Connection with Their Height and the Phasal Composition of Oak Groves According to Growth Stages.

Orig Pub : Sb. stud. rabot. Povolzhsk. lesotekhn. in-t, 1956, No 3, 24-30

Abstract : The fruit production of the oak was studied in the Toburdanovskaya estate of the Kanashskoye forest economy, Chuvashskaya ASSR, in 1953. In general fruit production was weak or satisfactory, and in only a few cases was it abundant or very abundant. It was noted that groves in the state of maturity in which all oak tree categories bear

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S/195/62/003/006/002/011
E075/E436

AUTHORS: Zaykov, G.Ye., Mayzus, Z.K.

TITLE: Oxidation of methylethylketone in the liquid and gaseous phases

PERIODICAL: Kinetika i kataliz, v.3, no.6, 1962, 846-854

TEXT: A comparative study of the mechanism of oxidation of methylethylketone in the liquid and gaseous states was undertaken to elucidate the effect of polarity and the absence of hydrogen bonding in the oxidized molecules. The liquid phase oxidation was studied for the first time. Both the liquid and gaseous oxidation were carried out at 145°C and 50 atm. The liquid oxidation was a complex chain reaction imitating a first order reaction. Individual stages of the reactions were studied by adding α-naphthol at various times during the reaction, this stopped the chain reactions and permitted to characterize the non-chain reactions. Diacetyl, ketohydroperoxide and ethylacetate (intermediate oxidation products) undergo non-chain decomposition, the hydroperoxide in this case decomposing much more rapidly than hydrocarbon hydroperoxides. Diacetyl decomposes

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at a higher rate than that calculated from the consumption of α-naphthol which indicates that the branching reaction is not the only decomposition process. Ethylacetate is decomposed by water forming during the oxidation, acetic acid thus produced being a part of the total acid formed. The remainder of the acid is formed from the decomposition of diacetyl. Acetic acid is also formed from ketohydroperoxide via diacetyl. In the gaseous phase oxidation there is formation of formaldehyde, acetaldehyde, acetone, formic acid, methyl acetate, methyl alcohol and CO, which are not produced in the liquid phase oxidation. Conversely, the formation of ethylacetate and diacetyl decreases during the gaseous oxidation. There is little difference however in the formation of acetic acid. Comparing the rates of formation of the oxidation products during the two types of oxidation, the authors conclude that the specificity of the liquid phase oxidation is due to the polarity of the oxidized substance. Comparison with the oxidation of ethyl alcohol indicates that hydrogen bonds also affect the mechanism of oxidation. The mechanism of chain branching is the same for the liquid and gaseous oxidations which

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Oxidation of methylethylketone ... S/195/62/003/006/002/011
E075/E436

indicates that the polarity of the oxidized substance affects all the stages of the oxidation process. There are 6 figures and 2 tables.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR)

SUBMITTED: October 7, 1961

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, G.Ye.

Separation of low aliphatic alcohols by paper chromatography and their quantitative determination. Zhur.anal.khim. 15 no.1: 104-108 J-F '60. (MIRA 13:5)

1. Institute of Chemical Physics, Academy of Sciences, U.S.S.R., Moscow.

(Alcohols)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, I.A., inzh.

Prevention of the operation of differential protection system of a transformer during the installation of a short-circuiting device in the zone of its action. Elek. sta. 35 no.12:75 D '64. (MIRA 18:2)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, K.

Skidding from short distances. Mast.lesa. no.4:1-3 Ap '57. (MIRA 10:10)

1.Master lesa Plesetskogo lestrankhoza.
(Lumber--Transportation)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A., kand.tekhn.nauk, dotsent; TSELUIKOV, V.S., inzh.; KAMINSKIY, D.M., kand.tekhn.nauk, dotsent; PEHETYAT'KO, V.N., inzh.; KAFTANOV, M.P., insh.; PERMYAKOV, V.M., inzh.; PROKOP'YEV, A.V., inzh.

Investigating and improving cogging conditions of sheet rolling mills. Izv. vys. ucheb. zav.; chern.met. no.5:131-144 My '58. (MIRA 11:7)

1.Sibirskiy metallurgicheskiy institut.
(Rolling mills)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M. A.

GOLUBEV, T.M., doktor tekhn. nauk, prof.; CHELYSHEV, N.A., kand. tekhn. nauk, dots.; ZAYKOV, M.A., kand. tekhn. nauk, dots.; KAFTANOV, M.P., inzh.; SHAMETS, IA.V., inzh.

Studying the operating conditions of a cogging mill. Izv. vys. ucheb. zav.; chern.met. no.2:99-112 F '58. (MIRA 11:5)

1. Sibirskiy metallurgicheskiy institut.
(Rolling mills)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A., kand. tekhn. nauk, dots.

Deformation resistance in carbon and nickel steels and alloys. Izv. vys. ucheb. zav.; chern. met. no.4:103-116 Ap '58. (MIRA 11:6)

1. Sibirskiy metallurgicheskiy institut.
(Deformations (Mechanics)) (Nickel steel--Testing)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

S/137/61/000/007/018/072
A060/A101

AUTHORS: Zaykov, M. A.; Tseluyev, V. S.; Permyakov, V. M.

TITLE: Rationalization of the reduction schedule of a medium gage shut mill on the basis of an automatic recording of the rolling stresses

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1961, 6, abstract 7D34 ("Tr. Konferentsii: Tekhn. progress v tekhnol. prokatn. proiz-va". Sverdlovsk, Metallurgizdat, 1960, 501-509)

TEXT: An investigation was carried out on the stress measurements of a medium gage sheet mill consisting of two successive Lauth three-high stands. Stress measuring instruments with high impedance resistance sensors and an electronic automatic poteniometric recorder were used for this purpose. As the original impulse the elastic stretching deformation of the frame pedestals during the passage of metal between the rolls was used. The analysis of the results of the investigation and calculations have shown that the optimal reduction schedule is, in the main, determined only by the rolling stress admissible according to the strength conditions of the main parts of the working stand. Depending on the value of strain resistance, the grading of the mill is divided

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Rationalization of the reduction schedule ... S/137/61/000/007/018/072
A060/A101

into six groups with a difference by a factor of 1.25 in the strain resistance of steel between neighboring groups. Corresponding to this, the grading of the mill as to sheet width is divided into four categories, also with difference factor of 1.25, and into six groups according to grades of steel. In accordance with this categorization and the rolling stresses found, five optimal reduction schedules were worked out, embracing the entire range of the mill.

Yu. Manegin

[Abstracter's note: Complete translation]

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SOV/148-59-9-7/22

AUTHORS: Zaykov, M. A. (Candidate of Technical Sciences, Docent), Shamets, Ya. V., Peretyak'ko, V. N. (Engineers)

TITLE: Concerning the Curve of Strengthening During Hot Rolling of Steel

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, 1959, Nr 9, pp 73-82 (USSR)

ABSTRACT: An analytical study and an experimental test of hot rolling and upsetting of carbon steels for determination of the effect of the degree of deformation on the resistance to plastic deformation. The previous work of K. Fink, D. Kol'man, R. M. Dalen, E. Gudremon, and K. Kallen is mentioned. The tests were conducted on the laboratory rolling mill equipped with a gear transmission, which allows one to change the speed of rolling from 0.037 to 6.10 m/sec; the relative speed of deformation then changes from 0.2 to 300 1/sec. The metal was deformed at the temperature of the

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Concerning the Curve of Strengthening During Hot Rolling of Steel

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stable-phase state from 850 to 1,200° C. The heating in all tests exceeded by 90 to 100° C the usual accepted temperature of rolling with subsequent cooling to the temperature of the test. In the parallel compression tests of cylindrical samples the deformation was achieved directly in the heating furnace. The forces were measured by the modern dynamometers with wire resistance transmitters and automatic recording by an oscillograph. The results of tests of rolling and upsetting of samples of various thickness from MSt3 steel at 900° C are given in Fig. 1. For studying the character of the curve at high and extra-high degrees of deformation (up to 90 to 95%) and at angles of bite exceeding the angle of repose (α/β up to 1.8), additional tests were made in rolling lead samples (see Fig. 2) on the mill with the hydraulic screwdown device. Both Figs. 1 and 2 show that with the change of the degree of deformation the resistance to deformation is far from constnat, contrary to the ideas of some previous writers. The increase of the thickness of

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Concerning the Curve of Strengthening During Hot Rolling of Steel

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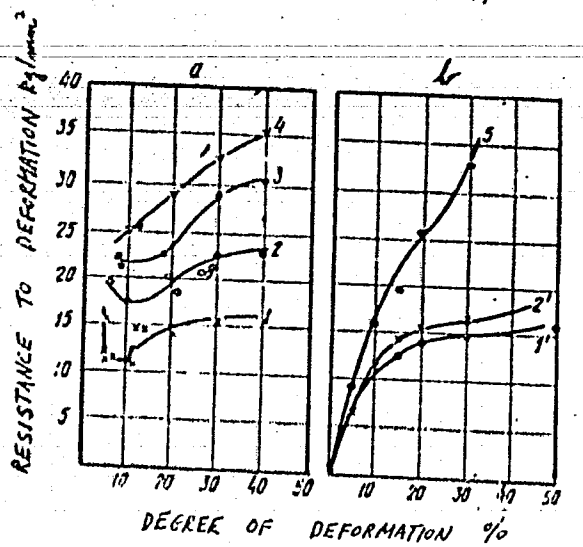
Fig. 1. Resistance to deformation during rolling (a) and upsetting (b) of samples at different degrees and speeds of deformation. 1,1', thickness of samples H = 30 mm; average relative speed of deformation u = 0.3 1/sec; 2,2', H = 12 mm, u = 1.0 1/sec; 3, H = 5 mm, u = 20 1/sec; 4, H = 3.75 mm, u = 50 1/sec; 5, H = 5 mm, u = 100 1/sec.



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Concerning the Curve of Strengthening During Hot Rolling of Steel

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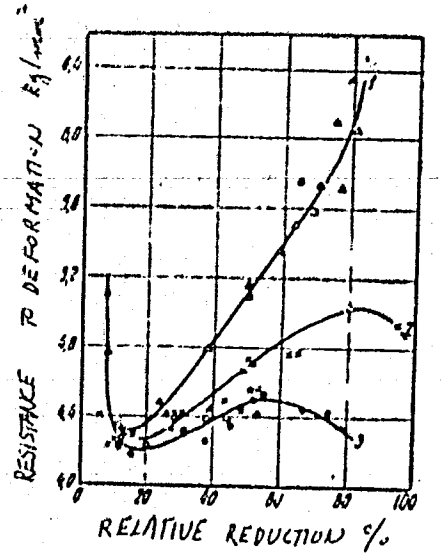

Fig. 2. The resistance to deformation during rolling of lead samples with the degree of deformation up to 95% (α/β up to 1.8). Curve 1, H/D = 0.178; 2, 0.35; 3, 0.536.

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Concerning the Curve of Strengthening During Hot Rolling of Steel

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sample results in lowering of the resistance to deformation. At the same time the rolling tests showed some "anomaly." When the degree of deformation is lowered to zero, the resistance to deformation decreases but does not come to zero, and from the minimum (at about 10% of deformation) it increases. The anomaly increases with the increase of rolling thickness. The tests of upsetting cylindrical samples did not produce such a phenomena. The extensive check tests of rolling and upsetting the MSt3 steel samples at various temperatures, speeds, and degrees of deformation showed that the anomaly increases (a) with the increase of rolling thickness; (b) with the increase of speed of deformation; (c) with lowering of rolling temperature; and (d) with lowering of the degree of deformation. The article makes an attempt to explain this effect on the basis of propagation of plastic deformation and the conpensating action of the rigid ends of the strip during rolling. The authors begin with an equation offered by Dinnik [Ref 7: Proceedings of the Conference of Institutions

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of Higher Education, Modern Accomplishments in Rolling Industry, L., 8, 1958 / and derive 19 equations. They use I. Ya. Tarnovskiy's analysis / Ref 2: Tarnovskiy, I. Ya., Shape-Changing During Plastic Working of Metals, Metallurgizdat, 1954) for determination of the problem: which one of the stresses, the longitudinal (σ_x) or the transverse (σ_y) will be at a minimum during rolling.

Considering the forces during rolling in convex, or concave roll passes, which in addition to forces of friction contain the "wedging" or "propping" forces, Tarnovskiy offers a conception of a "coefficient of tool shape"

$$\mu = \frac{\sigma_y}{\sigma_x} = \frac{\cos\theta^\circ \pm \frac{1}{f}\sin\theta^\circ}{\cos\frac{1}{2}(\alpha+\gamma) - \frac{1}{f}\sin\frac{1}{2}(\alpha+\gamma)} \qquad (8)$$

where θ = angle of crest (or flange) of roll; α = angle of bite; and γ = angle of neutral section.

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Concerning the Curve of Strengthening During Hot Rolling of Steel

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The relationship between the resistance to deformation and the degree of deformation are given in Fig. 5.

Caption to Fig. 5.

Fig. 5. The experimental determination of single axis resistance to deformation (point k), the criterion state of stress on account of contact friction forces (solid curves) and the criterion of state of stress on account of compensating action of the rigid ends of the strip (dotted lines) during rolling. Material--lead at 20° C. Thickness of samples (a) H/D = 0.178; (b) = 0.35; (c) 0.536.

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Figure 5 on following card.

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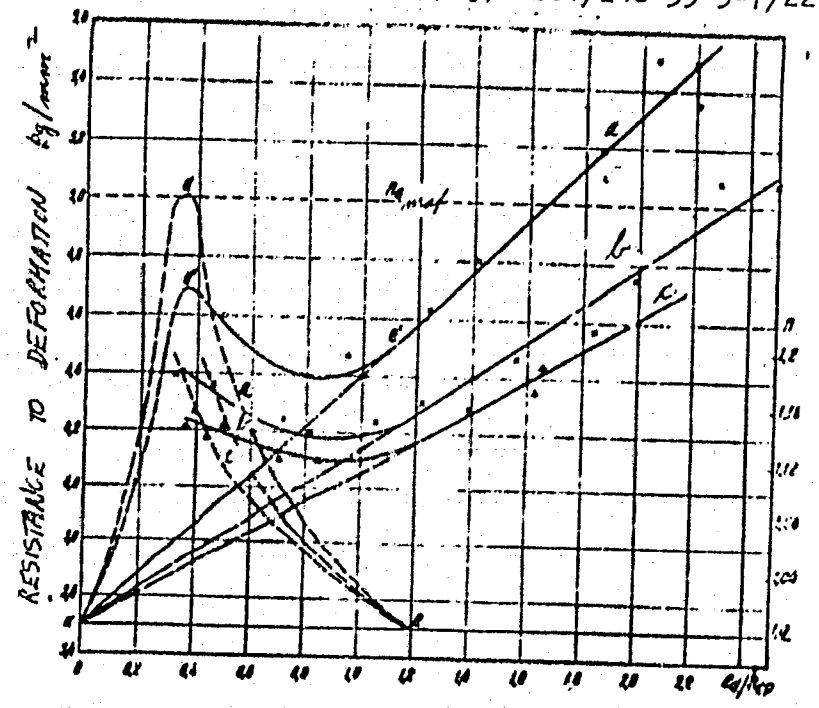

Fig. 5

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Concerning the Curve of Strengthening During Hot Rolling of Steel

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SOV/148-59-9-7/22

The experiments of V. V. Smirnov [Ref 5: Tselikov, A. I., Smirnov, V. V., Stal', 7, 614, 1952], Rokotyan [Ref 6: Rokotyan, Ye. S., Proceedings of TsNIIMAsh, Book 73, Rolling Mills, Mashgiz, 1955] and Dinnik [Ref 7: Dinnik, A. A., Proceedings of the Conference of Institutions of Higher Education, Modern Accomplishments in Rolling Industry, L., 8, 1958], led to an experimental equation for the factor of shape l_d/h. Then n_σ = the criterion of state of stress on account of forces of friction can be determined as follows:

$$n_\sigma = \varphi(v)\left(\frac{h}{D}\right)^{0.6}\left(\frac{l_d}{h}\right)^{-0.4} \qquad (19)$$

where $\varphi(v)$ is a function of the speed of deformation; and h/D is a function of strip dimensions. Figures 7 and 8 give the curves of strengthening of steel MSt3.

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Concerning the Curve of Strengthening During Hot Rolling of Steel

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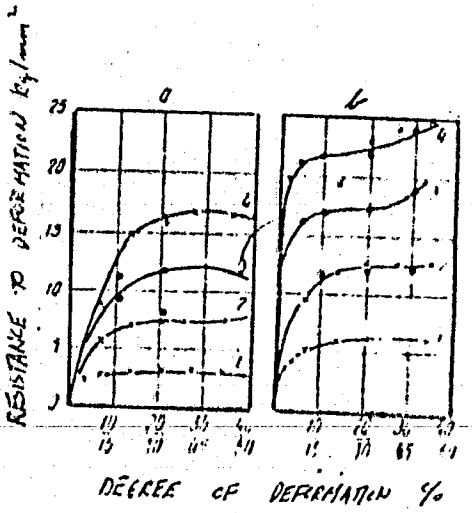
Fig. 7. The curves of strengthening of MSt steel obtained during upsetting (x) and rolling (.) at 1,100° C (a) and 900° C (b) and the equivalent degrees of deformation (numerator during rolling; denominator during upsetting). Speed of deformation (1) 3.10^{-4} 1/sec; (2) 0.6 1/sec; (3) 10 1/sec; (4) 100 to 200 1/sec.



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Concerning the Curve of Strengthening During Hot Rolling of Steel

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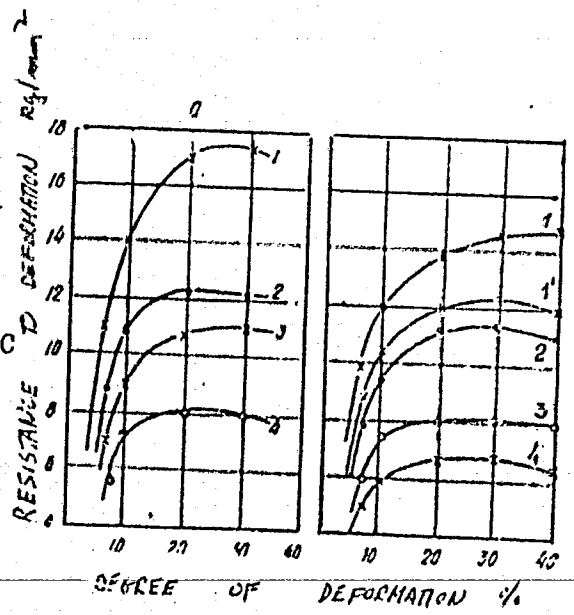

Fig. 8. Curves of strengthening of MSt3 steel during upsetting and rolling at high temperatures and speeds of deformation 3 to 5 1/sec (a) 0.3 to 0.5 1/sec (b). Temperature: (1) 850; (1') 900; (2) 950; (3) 1,050 and (4) 1,150° C (the degrees of deformation are referred to rolling).

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Concerning the Curve of Strengthening During Hot Rolling of Steel

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The criterion n_σ of state of stress on account of contact friction forces, besides the shape factor (l_d / h_{cp}), depends on the thickness of the strip (H/D) and the speed of deformation (u), which confirms the idea of the effect of completeness of envelopement of the mass of metal by plastic deformation. The tests show that the temperature of metal has very little influence on the factor under investigation and in the first approximation can be neglected. There are 9 figures; and 7 Soviet references.

ASSOCIATION: Siberian Metallurgical Institute (Sibirskiy metallurgicheskiy institut)

SUBMITTED: January 6, 1959

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

PHASE I BOOK EXPLOITATION SOV/5413

Zaykov, Mark Andreyevich

Rezhimy deformatsii i usiliya pri goryachey prokatke (Pressure and Deformation Regimes in Hot Rolling) Sverdlovsk, Metallurgizdat, 1960. 299 p. Errata slip inserted. 4,200 copies printed.

Reviewer: I. Ya. Tarnovskiy, Professor; Ed.: V. B. Lyashkov; Ed. of Publishing House: M. M. Syrchina; Tech. Ed.: R. M. Matlyuk.

PURPOSE: This book is intended for production engineers, for workers in laboratories and in the pass-designing departments of plants, and for personnel in scientific research and planning institutes who are concerned with planning rolling processes and designing rolling equipment. The book may also be useful to students attending schools of higher education.

COVERAGE: Characteristic features and regimes in rolling carbon and alloyed steels are described. Experimental data on the

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resistance of these steels to deformation and forces in rolling are provided. The metal's resistance to deformation is analyzed in terms of the influence of the chemical composition of steel, the temperature, degree and rate of deformation, and the shape of the pass. Necessary calculation formulas are presented which are based on completed tests and on fundamental principles of the state-of-stress theory and the thermodynamics of the irreversible processes. Data on the resistance of carbon and alloyed steels to deformation and forces in rolling were obtained in the course of numerous experiments by the author in cooperation with the scientific workers, aspirants, and researchers of the Department of Pressworking of Metals of the Sibirskiy metallurgicheskiy institut (Siberian Metallurgical Institute). The author thanks Professor P. P. Polukhin for his valuable suggestions. There are 352 references: 235 Soviet and 117 non-Soviet.

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ZAYKOV, M.A.; TSELUYKOV, V.S.; KAMINSKIY, D.M.; KUZNETSOV, A.F.; BELINSKIY, Ye.D.; SHAMETS, Ya.V.; FEDOROV, N.A.; BARITSKIY, S.I.; ZAKHAROV, A.I.; ZHURAVLEV, M.A.; KOBYZEV, V.K.

Investigating energy and power parameters in plate rolling on reversing mills. Izv. vys. ucheb. zav.; chern. met. 7 no.2:100-107 '64. (MIRA 17:3)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A.; TSELUYKOV, V.S.; KAMINSKIY, D.M.; DADOCHKIN, N.V.; MESHCHERYAKOV, P.A.; MARININ, P.G.; MIRENSKIY, M.L.; PROKOP'YEV, A.V.; OVCHINNIKOVA, R.F.; Prinimali uchastiye; BELYAVSKIY, M.A.; KAFTANOV, M.P.; KUCHKO, I.I.; LAR'KINA, F.Ye.; MANCHEVSKIY, I.V.; MARAMYGIN, G.F.; MERKUTOV, V.N.; NASIBULIN, A.S.; NEFEDOV, M.K.; PERMYAKOV, V.M.; CHELYSHEV, N.A.; CHVANOV, L.K.

Investigating conditions of rolling on three-high billet mills. Izvy vys. ucheb. zav.; chern. met. 6 no.10:74-83 '63. (MIRA 16:12)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

TSELUYKOV, V.S.; ZAYKOV, M.A.; KAMINSKIY, D.M.

Power conditions of deformation during the rolling of thick plate. Izv. vys. ucheb. zav.; chern. met. 6 no.6:89-95 '63. (MIRA 16:8)

1. Sibirskiy metallurgicheskiy institut.
(Rolling (Metalwork))

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A.; TSELUYKOV, V.S.; KAMINSKIY, D.M.; DAIOCHKIN, N.V.; LAR'KINA, F.G.; MESHCHERYAKOV, P.A.; Prinimali uchastiye: PERMYAKOV, V.M.; MERKUTOV, V.N.; PROKOP'YEV, KAFTNAOV, M.P.; MARAMYGIN, G.F.; ZHURAVLEV, M.A.; MARININ, P.G.; NASIRUDIN, A.S.; MANCHEVSKIY, I.V.; PELYAVSKIY, M.A.; SERGEYEV, V.V.; CHVANOV, L.K.; KOBYLEV, V.K.; KUCHKO, I.I.; MIRENSKIY, M.L.

Pressure of the metal on rolls in rolling carbon and alloyed steels on a three-high billet mill. Izv. v/s. ucheb. zav.; chern. met. 4 no.8:78-83 '61. (MIRA 14:9)

1. Sibirskiy metallurgicheskiy institut.
(Rolling mills)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

PERETYAT'KO, V.N.; ZAYKOV, M.A.

Center of deformation in the periodic rolling of wedge-shaped strips. Izv.vys.ucheb.zav.; chern.met. 5 no.4:82-90 '62. (MIRA 15:5)

1. Sibirskiy metallurgicheskiy institut.
(Rolling (Metalwork)) (Deformations (Mechanics))

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

PERETYAT'KO, V.N.; ZAYKOV, M.A.

Engineering methods of calculating technological processes of the press working of metals. Izv.vys.uchob.zav.; chern.met. 5 no.4:204-206 '62. (MIRA 15:5)

1. Sibirskiy metallurgicheskiy institut.
(Rolling (Metalwork)) (Forging)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A.; PUDINOV, V.V.

Investigating temperature changes during the rolling of plain and shaped sections. Izv.vys.uchob.zav.; chern.met. 5 no.6:81-90 '62. (MIRA 15:7)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.
(Rolling (Metalwork)) (Heat--Transmission)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A.; TSELUYKOV, V.S.

Calculating efficient reduction conditions for hot rolling mills. Izv. vys. ucheb. zav.; chern. met. 6 no.8:107-114 '63. (MIRA 16:11)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

PERETYAT'KO, V.N.; ZAYKOV, M.A.

Evaluating the rigidity of stressed state. Izv.vys.ucheb.zav.; chern. met. 8 no.4:117-122 '65. (MIRA 18:4)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A.; DADOCHKIN, N.V.

Arm of the resultant in rolling with smooth rolls. Izv. vys. ucheb. zav.; chern. met. no.8:96-103 '60. (MIRA 13:9)

1. Sibirskiy metallurgicheskiy institut.
(Rolling mills)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A., kand.tekhn.nauk, dots.; PERETYAT'KO, V.N., inzh.

Criteria of plasticity in press working of metals. Izv.vys. uchob.zav.; chern.met. 2 no.8:75-86 Ag '59. (MIRA 13:4)

1. Sibirskiy metallurgicheskiy institut. Rekomendovano kafedroy obrabotki metallov davleniyem Sibirskogo metallurgicheskogo instituta.
(Metalwork) (Plasticity)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A., kand.tekhn.nauk, dots.; TSELUYKOV, V.S., inzh.; PERMYAKOV, V.M., inzh.; TREESHIN, G.G., inzh.

Automatic measurement of forces in rolling as basis for improving the conditions of reduction. Izv.vys.ucheb.zav.; chern.met. 2 no.6:53-62 Je '59. (MIRA 13:1)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat. Rekomendovano kafedroy obrabotki metallov davleniyem Sibirskogo metallurgicheskogo instituta.
(Rolling (Metalwork))

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

AL'KOV, V.G.; ZAYKOV, M.A.

Forces and moments during rolling in box grooves. Izv. vys. ucheb. zav.; chern. met. 7 no.7:120-124 '64 (MIRA 17:8)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M. A.; AL'KOV, V. G.

Arm of the resultant during rolling in box grooves. Izv. vys. ucheb. zav.; chern. met. 7 no. 4:109-114 '64. (MIRA 17:5)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M. A.; FEDOROV, N. A.

Investigating forces and moments during the rolling of flanged shapes. Izv. vys. uchebzav.; chern.met. 7 no. 4:103-108 '64. (MIRA 17:5)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

TSELUYKOV, V. S.; ZAYKOV, M. A.; FEDOROV, N. A.

Distribution of torque in the spindles of two-high reversing medium sheet mills. Izv. vys. uchebn. zav.; chern. met. 7 no.6: 109-113 '64. (MIRA 17:7)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

S/148/60/000/012/006/020
A161/A133

AUTHORS: Dadochkin, N. V., and Zaykov, M. A.

TITLE: Effect of various rolling factors on the resultant arm

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 12, 1960, 70 - 76

TEXT: The arm of the resultant of forces acting on the rolls of rolling mills is one of the major ynamic factors in the process, and the generally accepted value of the resultant arm factor is $\psi = 0.5 = \text{const}$. It is proven by calculation and in experiments that ψ is not constant but presents a complex function of many variables, i.e. the degree of deformation, the shape factor (l_d/H), and factors that affect the deformation resistance. The experiments were carried out in a laboratory on a mill with 90 mm diameter rolls, and on a "750" mill at the Kuznetskiy metallurgicheskiy zavod (Kuznetsk Metallurgical Plant). Laboratory specimens were prepared from lead and rimming 3кп (3kp) steel;. on the industrial scale the specimens were 250 x 250 and 320 x 330 mm blooms of different steel grades rolled into 100 x 100 billets. The results are discussed and illustrated by graphs.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

Effect of various rolling factors on the... S/148/60/000/012/006/020
A161/A133

The general pattern of the effect of the reduction degree was the same as determined previously (Ref. 3: Zaykov, Dadochkin. Izv. vysch. ucb. zav. Chern. metallurgiya, 1960, no. 8), i.e. it was the same with all specimen thicknesses, and the extreme points of the curves shifted towards the lower reduction values. The absolute ψ value at the minimum point varied between 0.2 and 0.39, at the maximum point it was in the range of 0.42 - 0.5, then dropped again and then remained on practically the same level in further variations of the reduction. The strip thickness had a great effect at low H/D relation and at $l_d/h_{mean} < 1$, and less expressed effect at a higher relation. At low l_d/h_{mean} the application point of the resultant moved abruptly to the input side of the rolls, and the ψ factor rose to 0.6 - 0.8 (depending on the temperature of the metal). With further decrease of l_d/h_{mean} the ψ value rose to a maximum. With a growing l_d/h_{mean} ratio the resultant application point moved to the output side of the rolls, and ψ dropped to minimum. The metal was heated to between 900 and 1,200°C. The speed of rolling had practically no effect. The chemical composition of steel showed a significant effect. Conclusion: The variations and the absolute values of the resultant force arm are determined by the shape factor l_d/h_{mean} and

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

the rolling temperature; the relative reduction, strip thickness and rolling speed have only a slight effect. There are 8 figures and 3 Soviet-bloc references.

ASSOCIATION: Sibirskiy metallurgicheskiy institut (Siberian metallurgical institute)

SUBMITTED: December 21, 1959

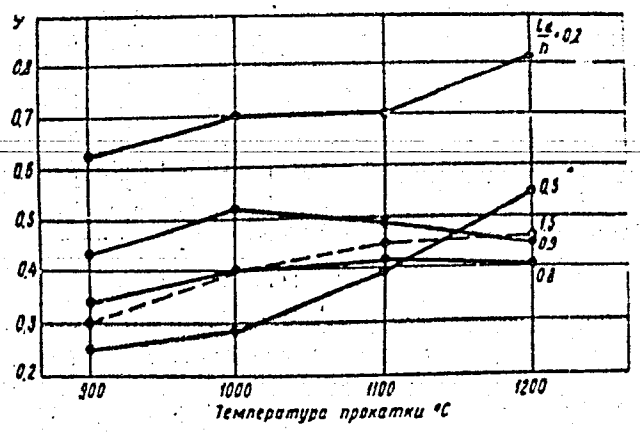

Fig. 7. Variations of ψ with temperature in rolling steel specimens with a different shape factor value.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

S/148/62/000/004/006/006
E193/E383

AUTHORS: Peretyat'ko, V.N. and Zaykov, M.A.

TITLE: Engineering methods of calculations pertaining to technological processes of the squeezing group of metal-working operations

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no. 4, 1962, pp. 204 - 206

TEXT: A conference devoted to the above subject and organized by Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute), Leningradskiy mekhanicheskiy institut (Leningrad Mechanical Institute), Sverdlovskoye and Leningradskoye pravleniye Nauchno-tekhnicheskogo obshchestva mashinostroitel'noy promyshlennosti (Boards of the Sverdlovsk and Leningrad Machine-building Industrial Research Associations) and Sverdlovskoye pravleniye Nauchno-tekhnicheskogo obshchestva chernoy metallurgii Tsentral'nogo byulletenya tekhnicheskoy informatsii Sverdlovskogo sovnarkhoza (Board of Sverdlovsk Scientific Technical Association of Ferrous Metallurgy of the Central Bulletin of Technical Information of the Sverdlovsk

Card 1/4

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

S/148/62/000/004/006/006
E193/E383

Engineering methods ....

Sovnarkhoz) was convened on November 14 - 18, 1961 in Sverdlovsk. 340 delegates, representing 23 higher-educational establishments, 42 industrial plants and 22 research and development institutes of the Soviet Union attended. The proceedings comprised sections on "drawing and rolling", "tube production" and "forging, stamping and extrusion".

After an opening address by the chairman of the Orgkomitet, Doctor of Technical Sciences Professor I.Ya. Tarnovskiy, a paper on "The role of science and theoretical studies in the development of improved methods of metal-working by the squeezing group of operations" was read by Doctor of Technical Sciences Professor Ye.V. Pal'mov.

Corresponding Member of the AS USSR A.I. Tselikov delivered a paper devoted to the determination of roll pressure.

Corresponding Member of the AS USSR A.A. Il'yushin read a paper on the present state and application of the general theory of plasticity to the metal-working of the squeezing group operations. The problem of determination of the plasticity (workability) in

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

S/148/62/000/004/006/006
E193/E383

Engineering methods ....

the practical calculations of plastic working of metals was dealt with in a paper by Doctor of Technical Sciences G.A. Smirnov-Alyayev.
Other papers read during the plenary session included "Methods of linearization of basic equations of the theory of plasticity" by Doctor of Technical Sciences Ye.P. Unksov, "On the application of variation equations of the mechanics of plastic media in the development of engineering methods of calculations of metal-working processes of the squeezing group" by I.Ya. Tarnovskiy and "Development of the theory of plastic shaping of metals" by A.D. Tomlenov.
In the section "rolling and drawing", 35 papers were delivered; their subjects can be divided into the following groups:
1) Mathematical analysis of metal-working processes of the squeezing group;
2) Kinematics of the metal-working processes of operations of the squeezing group;
3) Energetic conditions during deformation;
4) Deformation of metals in rolls of complex shape;

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

Engineering methods S/148/62/000/004/006/006
E193/E383

5) Distribution of stresses and strains in rolls;
6) Rolling of bi-metals, extrusion, plasticity, etc.
Particular interest was aroused by papers delivered by Doctor of Technical Sciences P.I. Polukhin and his co-workers on the application of photo-elastic methods for the analysis of stresses and strains in rolling.
The problem of the technological foundations of automation was discussed only in one paper by Candidate of Technical Sciences V.I. Vydrin.
In the 10 papers devoted to tube production, the following problems were discussed: study of specific pressure during tube-rolling; the state of stress during piercing; the physical nature of the piercing process.
26 papers delivered during the session on forging, stamping and extrusion were devoted mainly to analysis of the state of stress and strain, investigation of pressures required and selection of the shape of the blanks in forging and stamping operations.
ASSOCIATION: Sibirskiy metallurgicheskiy institut (Siberian Metallurgical Institute)
SUBMITTED: December 15, 1961
Card 4/4

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

PERETYAT'KO, V.N.; ZAYKOV, M.A.

Determining final deformations and specific rolling pressures by experimental data from hot torsion testing. Izv. vys. ucheb. zav.; chern. met. 7 no.10:80-85 '64.

(MIRA 17:11)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A., kand.tekhn.nauk dots.; SHAMETS, Ya.V., insh.; PERETYAT'KO, V.N., inzh.

Hardening curve in the hot rolling of steel. Izv.vys.ucheb.zav.; chern.met. 2 no.9:73-82 S '59. (MIRA 13:4)

1. Sibirskiy metallurgicheskiy institut. Rekomendovano kafedroy obrabotki metallov davleniyem Sibirskogo metallurgicheskogo instituta.
(Rolling (Metalwork)) (Steel--Hardening)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A.; POKATILOV, Yu.P.

Determining the parameters of roller straightening machines. Izv. vys.ucheb.zav.; chern.met. 8 no.6:194-201 '65. (MIRA 18:8)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

CHELYSHEV, N.A.; PERMYAKOV, V.M.; KAFTANOV, M.P.; ZAYKOV, M.A.; KAMINSKIY, D.M.; ZAKHARENKO, N.I.; PROKOP'YEV, A.V.

Characteristics of rolling rail steel ingots at the Kuznetsk blooming mill. Izv.vys.uchob.zav.; chern.met. 8 no.8:94-101 '65. (MIRA 18:8)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A.; PERETYAT'KO, V.N.

Criteria of the plasticity of metal. Izv. vys. uchebn. zav.: chern. met. 8 no.10:90-93 '65. (MIRA 18:9

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

NEKRASOV, S.G.; ZAYKOV, N.A.

New developments in ferrous metallurgy. Izv. vys. uchebn. zav.; chern. met. 8 no.10:177-179 '65. (MIRA 18:9)

1. Sibirskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SOV/137-58-11-23414

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 225 (USSR)

AUTHOR: Zaykov, M. A.

TITLE: Strength and Resistance to Deformation in Alloyed and Carbon Steels, Nonferrous Metals, and Alloys at Elevated Temperatures and Strain Rates (Prochnost' i soprotivleniye deformirovaniyu uglerodistykh i legirovannykh staley i tsvetnykh metallov i splavov pri vysokikh temperaturakh nagreva i skorostyakh deformatsii)

PERIODICAL: Dokl. 7-y Nauchn. konferentsii, posvyashch. 40-letiyu Velikoy Oktyabr'skoy sots. revolyutsii. Nr 2. Tomsk, Tomskiy un-t, 1957, pp 58-59

ABSTRACT: The relationship between the strength of metals and alloys and their resistance to deformation at elevated temperatures and strain rates was investigated theoretically as well as experimentally. By utilizing the theory of hardening and recovery, together with certain postulates of thermodynamics, certain generalized formulae were derived analytically encompassing all principal factors affecting the property of metal to resist plastic deformation, namely, the chemical composition, the temperature, and the degree and rate of strain. An

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SOV/137-58-11-23414

Strength and Resistance to Deformation in Alloyed and Carbon Steels, (cont.)

experimental investigation of: numerous ferrous and nonferrous metals, alloys of nonferrous metals, and alloyed and carbon steels tested at various temperatures (from the $T_{recryst.}$ to the temperature of fusion T_s), strain rates (from 10^{-4} to 10^2-10^3 sec^{-1}), and degrees of deformation (from 0 to 60%) produced results which were in sufficient agreement with the equations derived theoretically.

V.N.

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APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SHAMETS, Ya.V., inzh.; ZAYKOV, M.A., dotsent, kand.tekhn.nauk

Resistance to deformation in carbon steels under the effect of high-speed hot rolling. Izv.vys.uchebn.zav.; chern.met. 2 no.5:45-53 My '59. (MIRA 12:9)

1. Sibirskiy metallurgicheskiy institut, Rekomendovano kafedroy obrabotki metallov davleniyem Sibirskogo metallurgicheskogo instituta.
(Deformations (Mechanics)) (Rolling (Metalwork))

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

S/123/59/000/09/08/036
A002/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 9, p. 51, # 33182

AUTHOR: Zaykov, M. A.

TITLE: The Strength and the Resistance to Deformation of Carbon and Alloy Steels and Non-Ferrous Metals and Alloys at High Heating Temperatures and Deformation Rates

PERIODICAL: Dokl. 7-y Nauchn. konferentsii, posvyashch. 40-letiyu Velikoy Oktyabrskoy revolyutsii. Vyp. 2, Tomsk, Tomskiy un-t, 1957, pp. 58-59

TEXT: The combined application of the theories of hardening and relaxation and the basic tenets of thermodynamics will result in some generalizing equations comprising basic factors - chemical composition, temperature, degree and rate of deformation - affecting the resistance of metals to plastic deformation. The experimental investigation into the resistance to plastic

VB

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

S/123/59/000/09/08/036
A002/A001

The Strength and the Resistance to Deformation of Carbon and Alloy Steels and Non-Ferrous Metals and Alloys at High Heating Temperatures and Deformation Rates

deformation of various metals and alloys under different conditions revealed a satisfactory accuracy of the theoretical equations.

K. S. M.

Translator's note: This is the full translation of the original Russian abstract.

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APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SKOROKHODOV, N.Ye., dotsent; CHELYSHEV, N.A., kand.tekhn.nauk; ZAYKOV, M.A., dotsent; FROLOV, M.P., inzh.; KOROLEV, A.S., inzh.; KRAVCHENKO, L.Ya., inzh.; SKOROKHODOVA, V.F., inzh.; ABAKUMOV, V.A., dotsent [deceased]; KAFTANOV, M.P., inzh.

Investigating conditions of rolling plain and shaped sections on a medium-shape rolling mill. Trudy NTO Chern.met. 15:24-55 '59. (MIRA 13:7)
(Rolling mills)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

Zaykov, M. A. and Golubev, T. M.

"Rolling With Constant Pressure", Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, 1958, Nr 1, pp 117-127.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SOV/137-58-11-22331

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 69 (USSR)

AUTHORS: Golubev, T. M., Zaykov, M. A.

TITLE: Rolling at Constant Pressure (Prokatka s postoyannym davleniyem)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 1, pp 117-127

ABSTRACT: An effective measure for utilization of reserve forces in rolling (R) is held to be reduction in the gap between the rolls after they contact the strip. Experiments are run on a model of a two-high cogging mill with rolls of 28 mm diam and roll bodies 70 mm in length, and with a hydraulic plunger-piston in place of the usual screwdown. When 15x15 mm Pb samples are R, the angle of contact was brought to 61°30' as the rolls were brought together in the process of R. This is 91% higher than the angle of natural contact between metal and rolls. Under these conditions, the absolute breakdown was increased 240% and the breakdown coefficient was brought to 13.25. Unit pressure was reduced by 15%, a fact to be explained by the appearance of tensile stresses in the contact area. Installation of a hydraulically compensated pressure unit permits

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SOV/137-58-11-22331

Rolling at Constant Pressure

complete utilization of reserve R forces and automation of modern R mills. In the new R process the angle of contact doubles, and the breakdown ratio rises several-fold per pass.

P. B.

Card 2/2

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SOV/137-58-9-18967

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 116 (USSR)

AUTHORS: Golubev, T.M., Chelyshev, N.A., Zaykov, M.A., Kaftanov, M.P., Shamets, Ya.V.

TITLE: An Investigation of the Functioning of a Breakdown Mill (Issledovaniye rezhima raboty obzhimnogo stana)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 2, pp 99-112

ABSTRACT: Steady-state conditions in the rolling (R) of blooms and slabs of rail, killed, and certain quality steels are studied at the blooming mill of the Kuznetsk Metallurgical Kombinat. The readings of the mill dial were recorded for subsequent determination of the actual reduction per pass. Simultaneously, the R conditions of each ingot were determined; namely, the number of passes in each groove and the number and sequence of turnings. The functioning of the main motor of the mill was recorded by a MPO-2 8-loop oscillograph. The roll-separating pressure was measured by means of electrical inductive capsules inserted beneath the lower bearings of the mill and precalibrated on an 800-t hydraulic press. The capsule readings

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SOV/137-58-9-18967

An Investigation of the Functioning of a Breakdown Mill

were recorded by the oscillograph. The R temperature of the ingots was measured by optical pyrometer. The investigation determined that the reductions in use caused the roll-separating pressure to be distributed unevenly, namely, that it was greater on the roll bodies than in the passes and that the loading of the mill was uneven from pass to pass. Specific recommendations are made with regard to changes in the R procedure to eliminate inequalities in mill loading. The motor overheats during the period required to R a single ingot, hence, better air cooling is required. The machinery is in operation from 20 to 53% of the overall ingot R time. Increasing output requires a reduction in idling operation between passes. It is wrong to increase R velocity above the rating, since an insignificant increase in R speed causes a substantial rise in motor heating. The load on the motor in R blooms of killed steel is significantly less than with rail steel, and it is consequently possible to increase draft in R killed steel.

S.G.

1. Rolling mills--Performance 2. Steel--Production 3. Rolling mills--Testing equipment 4. Rolling mills--Test results

Card 2/2

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SOV/137-58-11-22371

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 76 (USSR)

AUTHOR: Zaykov, M. A.

TITLE: Analysis of Universal Spindles for Rolling Mills (K raschetu universal'nykh shpindeley prokatnykh stanov)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 3, pp 161-174

ABSTRACT: A method is developed for determining the areas, the static moments (M) of the areas, the M of inertia, the resisting M in bending and torsion, and the position of the center of gravity and of the neutral line of the cross sections of universal spindle heads. It is shown that the results obtained in the calculation of the resisting M in torsion and bending of an ellipse relative to the major axis differs by 30% from the data calculated in accordance with the approximated formulas in current use. The magnitudes of the cross-sectional areas, the static area M's, and the resisting M relative to the major bending M determined by these methods are virtually in agreement.

M. Z.

Card 1/1

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A., kand. tekhn. nauk, dotsent

Criterion for the state of stress in metal during rolling with grooved rolls. Izv. vys. ucheb. zav.; chern. met. 2 no.3: 47-64 Mr '59. (MIRA 12:7)

1. Sibirskiy metallurgicheskiy institut.
(Deformations (Mechanics))
(Rolling mills)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, Mark Andreyevich; TARNOVSKIY, I.Ya., prof., retsenzent; POLUKHIN, P.I., prof., retsenzent; LYASHKOV, V.B., dotsent, red.; SYRCHINA, M.M., red.izd-va; MATLYUK, R.M., tekhn.red.

[Deformations and forces in hot rolling] Rezhimy deformatsii i usiliia pri goriachei prokatke. Sverdlovsk, Gos.nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1960. 299 p. (MIRA 14:3)
(Rolling mills) (Deformations (Mechanics))

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

137-58-5-9474

ZAYKOV, M.A.

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 95 (USSR)

AUTHORS: Golubev, T.M., Zaykov, M.A., Shamets, Ya.V.

TITLE: Effect of Rate of Deformation on Unit Pressure in Hot Rolling of Steel (Vliyaniye skorosti deformatsii na udel'noye davleniye pri goryachey prokatke stali)

PERIODICAL: Sb. tr. Kuznetskogo mezhobl. pravl. Nauchno-tekhn. o-va chernoy metallurgii, 1956, Vol 1, pp 96-105

ABSTRACT: The effect of rate of deformation on unit pressure was studied in laboratory-mill rolling (R) of steel specimens with an H/D ratio of 0.06-0.5 ratio at 900-1200°C and a degree of deformation (D) of 0-50% at 8.8-1400 roll rpm. At various degrees of D and temperatures, the relationship between D resistance and D rate is polytropic. It is shown that at low degrees of hot-rolling D a hardening threshold is encountered and that this threshold disturbs the monotony of the curve for the relationship between unit pressure and degree of D. This phenomenon was not observed at H/D of 0.22-0.25 and an R rate of 0.037 m/sec, and also at H/D of 0.125 at any of the rates investigated.

Card 1/1

1. Steel--Mechanical properties 2. Steel--Deformation M.Z.
3. Steel--Temperature factors

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A., kand.tekhn.nauk, dotsent

Design of a universal spindle for rolling mills. Izv. vys. ucheb. zav.; chern. met. no.3:161-174 Mr '58. (MIRA 11:5)

1.Sibirskiy metallurgicheskiy institut.
(Rolling mills)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

Zaykov, M.A.

OHAPKA, A.M.; ZAYKOV, M.A.

Automatic measurement of forces in rolling by means of wire resistance strain gauges. Zav. lab. 23 no.8:964-965 '57. (MLRA 10:11)

1. Sibirskiy metallurgicheskiy institut im. S. Ordzhonikidze.
(Strain gauges) (Rolling (Metalwork))

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, M.A., kand.tekhn.nauk, dots.

Resistance to deformation of carbon and chromium steels. Izv. vys. ucheb. zav.; chern. met. no.7:135-145 Jl '58. (MIRA 11:10)

1. Sibirskiy metallurgicheskiy institut.
(Deformations (Mechanics)) (Steel--Testing)
(Chromium steel--Testing)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

PERETYAT'KO, V.N.; ZAYKOV, M.A.

Plasticity of carbon steels. Izv.vys.ucheb.zav.; chern.met. 4 no.6:67-74 '61. (MIRA 14:6)

1. Sibirskiy metallurgicheskiy institut.
(Steel--Testing) (Plasticity)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SALOV, Ye.M.; ZAYKOV, M.A.; TSELUYKOV, V.S.; KUZNETSOV, A.F.; KAMINSKIY, D.M.; MAZURIK, P.N.

Improving the production technology in the sheet-rolling plant of the Kuznetsk Metallurgical Works. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 18 no.10:5-6 O '65. (MIRA 18:12)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

D'YACHKOV, P.N.; ZAGAYNOV, G.G.; ZAYKOV, O.N.; FISHEL', B.T.

Concrete lining of teapot-type steel pouring ladles. Ogneupory 28 no.8:361-364 '63. (MIRA 16:9)

1. Vostochnyy institut ogneuporov, (for D'yachkov, Zagaynov).
2. Altayskiy traktornyy zavod (for Zaykov, Fishel').

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, P.I.

Review of the worse of the Transbaikalian Branch of the Geographical Society of the U.S.S.R. Zap. Zabaik. otd. Geog. ob-va SSSR no. 18:97-98 '62.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, P.I. (Chita)

Using materials obtained during student summer excursions in teaching geography. Geog.v shkole 24 no.3:51-54 My-Je '61. (MIRA 14:5)
(Chita Province--School excursions)
(Chita Province--Geography--Study and teaching)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

AUTHOR: Zaykov, P.I. SOV-26-58-3-47/51

TITLE: Fantastic Forms of Snow (Prichudlivyye formy snega)

PERIODICAL: Priroda, 1958, Nr 3, p 125 (USSR)

ABSTRACT: Phenomena of snow flux similar to those of glacier flux were observed during the end of January and the 1st of February 1956 in Tulun, Irkutsk Oblast'. One took on the shape of an extended tongue and was formed on the eastern cornice of a house. The other assumed the shape of a festoon and rested on a fence facing north. In both cases there was light intermittent snowing and wind of medium strength. There are 2 photos.

ASSOCIATION: Chitinskiy pedagogicheskiy institut (Chita Pedagogical Institute)

1. Snow--USSR 2. Snow--Physical properties 3. Wind--Meteorological effects

Card 1/1

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

SOURCE CODE: BU/0011/65/018/007/0607/0609

ACC NR: AP6026268

AUTHOR: Zaykov, R.

ORG: Physics Institute, BAN

TITLE: Periodic model of the nonstationary universe

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 7, 1965, 607-609

TOPIC TAGS: model, gravitation effect, cosmology, space magnetic field, space matter

ABSTRACT: In one of his earlier papers (Z. Astrophys., 6, 1933, 193) the author found a general periodic solution of Einstein's gravitational equations concerning an expanding spherical space of radius R = R(t) where the time t runs equally for all spacial points. However, the gravitational equation established in that paper contains the cosmologic constant . In the present work the constant is assumed zero (the Einstein-Friedman model) but the macroscopic plane of matter and electromagnetic field energy

$$\varrho = a_0 R^{-3} + b_0 R^{-4} \quad (1)$$

(during uniform distribution) is complemented by the term

$$\delta\varrho = -c_0 R^{-5} + d_0 R^{-6}, \quad (2)$$

arising from nonlinear effects taking place only for large concentrations of matter

Card 1/2

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ACC NR: AP6026268

and leading, e.g., to intensive emission of neutrino fluxes. The author shows that under these conditions there exist periodic solutions of the expanding spherical space for which one is not required to assume that the initial radius of such a space was equal to zero. This paper was presented by Academician Kh. Khristov on 7 April 1965. Orig. art. has: 15 formulas. [Orig. art. in Russian.] [JPRS: 33,542]

SUB CODE: 03 / SUBM DATE: none / OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ACC NR: AP6033077 SOURCE CODE: UR/0032/66/032/010/1264/1265

AUTHOR: Zraychenko, V. A.; Zaymovskiy, V. A.; Sapozhkova, I.; Marko, I.

ORG: Moscow Steel and Alloys Institute (Moskovskiy institut stali i splavov); Siberian Metallurgical Institute im. S. Ordzhonikidze (Sibirskiy metallurgicheskiy institut)

TITLE: Tensile test of thermomechanically strengthened steel with the use of high-speed motion pictures

SOURCE: Zavodskaya laboratoriya, v. 32, no. 10, 1966, 1264-1265

TOPIC TAGS: tensile stress, thermomechanical property, high speed photography, steel, thermomechanical treatment, ~~steel~~ tensile test / 50KhFA steel

ABSTRACT: A high-speed motion-picture technic was used recording stresses and deformation in tensile tests on thermomechanically strengthened steel. 50KhFA steel specimens, 4 mm in diameter, were subjected to low or high temperature thermomechanical treatment and then to tensile tests. A clock-type indicator made it possible to determine the elongation with an accuracy of up to 0.005 mm. The process of tensile testing and indicator reading were filmed with a movie camera at a speed of 32 frame/sec.; the process of necking and local plastic deformation in time were filmed with a speed from 200 to 1600 frame/sec. On the basis of the obtained data, the curves of load dependence of elongation and reduction of area and kinetic curves of necking were plotted. Orig. art. has: 2 figures.

SUB CODE: 11 / SUBM DATE: none

Card 1/1 UDC: 620.172:778.534.8

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAIKOV, R.

ZAIKOV, R. Symmetric form of quantum mechanics of the electron. pp. 3.
Vol. 5, Jan./Dec. 1955. IZVESTIIA SERIIA FIZICHESKA. Sofiia, Bulgaria.

SOURCE: East European Accessions List (EEAL) Vol. 6 No. 4 April 1957

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

Zaykov, Rashko

B-6

BULGARIA/Theoretical Physics

Abs Jour : Referat Zhur - Fizika, No 5, 1957, No 10907

Author : Zaykov, Rashko.

Inst : 0

Title : Symmetric Form of Quantum Mechanics of the Electron.

Orig Pub : Izv. B'lgar. AN. Otd. fiz.-matem. i tekhn. n., ser. fiz., 1955, 5, 3-26

Abstract : A generalization is given of the work by Proca (Proca, A., Ann. Phys., 1933, 20, 347) to include the case of interacting with the electromagnetic and meson fields. The Dirac equation is written in the form $(S - mc)\psi = 0$

$$S = \gamma_\lambda [(\hbar/i)\partial/\partial x^\lambda - (e/c)A_\lambda] - g\gamma_5\varphi$$

(φ is the pseudo-scalar potential of the meson field,

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

BULGARIA/Theoretical Physics

Abs Jour : Referat Zhur - Fizika, No 5, 1957, No 10907

B-6

them. It is proven that the electron at rest creates a meson field, satisfying the nonlinear equation

$$\Box \varphi - e^2 n_0 \varphi / c \sqrt{m^2 c^2 + g^2 \varphi^2} = 0.$$

Card 3/3

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, R. [Zaikov, R.].

New isobaric assignments for elementary particles. Doklady BAN 15 no.4:353-356 '62.

1. Submitted by Academician H. Hristov [Khristov, Kh.].

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYKOV, R.

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Sofia, Doklady Bolgarskoy Akademii Nauk, Vol 15, No 1, 1962

1. "Concerning a Combination Problem," B. SINDOV; article in German; pp 5-8.

2. "Concerning a Class of Equations in Analytical Mechanics in Terms of the Equations of I. Tsenov," D. MANGERON and S. DELKANU of the Polytechnical Institute of Jassy, Rumania; article in French; pp 9-11.

3. "A New Proof of the Ostrogradski-Hamilton Principle for Holonome and Nonholonome Systems, I. TSENOV; article in French; pp 13-16.

4. "Extended Symmetry under Powerful and Electromagnetic Interaction," R. ZAYKOV; article in English; pp 17-20.

5. "Profile of the Wind in the Layer of Air Close to the Earth under Conditions of Unstable Equilibrium," D. IORDANOV and L. KRYSTANOV; article in Russian with summary in English; pp 21-24.

6. "A Criterion for Recombination and Ionizing Radiation in the E Layer of the Ionosphere according to Observations during a Complete Solar Eclipse," G. NISTOROV and J. TAUBENHEIM; article in German; pp 25-28.

7. "Concerning the Solution of a System of Ordinary Nonlinear Differential Equations of the Second Order as Applied in Oceanography and Meteorology," P. ROZHAROV; article in Russian with English summary; pp 29-32.

8. "Glass Formation in an Na_2O-CaO-NgO-Al_2O_3-SiO_2 System," M. MARINOV, Ks. WODENICHAROVA, and T. RODEVA; article in German; pp 33-35.

9. "The Discovery of Several Acids Formed during the Thermal Decay of Citric Acid by Means of Paper Chromatography," A. PORCV and I. [illegible] of the Institute for Organic Chemistry of the Bulgarian Academy of Sciences; article in German; pp 37-40.

10. "Concerning the Fatty Acid Content in the Oil of Several Species of the Rosaceae Family," A. PORCV, Institute for Organic Chemistry of the Bulgarian Academy of Sciences; article in German; pp 41-44.

— 1/3 —

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

16 JUL 1962

Sofia, Matematika i fizika, Vol 5, No 2, March-April 1962

1. "Electronic Computers and Programming," Stoyanov STANCOV (not identified); pp 1-8.

2. "A Property of Infinite Series of Polynomials, Described in a Given Way Around a Circle," Spas [illegible] (not identified); pp 8-11.

3. "Semiconductor Materials," Stayka [illegible] (not identified), Sofia; pp 11-21.

4. "Mass Spectrometry," Engr Tr. [illegible] of [illegible] (not identified); pp 21-25.

5. "Work Outside of Class on Mathematics in the Fifth to Seventh Grades," P. Yu. [illegible]; continuation from Matematika i fizika, No 1, 1962; translated from the Russian, not otherwise identified; pp 25-31.

6. "How to Formulate Concepts in Physics in Middle Schools," P. GALAKOV (not identified), Sofia; pp 31-36.

7. "The Study of Mathematics in Czechoslovakia," M. [illegible], Mathematics Inspector (Insp. po matematika Inspektor po matematikata), [illegible] (not identified), Prague; pp 36-43.

8. "Patriotic Education through Physics Lessons," D. STOYCHKOVA (not identified), Varna; pp 43-45.

9. "Reciprocal Equations," Kiril N. [illegible] (not identified), Blagoevgrad; pp 52-57.

10. "Matter and Antimatter," Rashko [illegible], Senior Scientific Collaborator (Starshi [illegible] sutrudnik), Institute of Physics (Fizicheskiya institut), Bulgarian Academy of Sciences (BAN-Balgarska akademiya na naukite); pp 58-59.

— 1/1 —

ZAYKOV, Rashko

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

ZAYCOV, R. [ZAYKOV, R.]

Extended symmetry in strong and electromagnetic interactions. Doklady BAN 15 no.1:17-20 '62.

1. Submitted by academician Kh. Khristov.

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$$ds^2 = C(r)\{ G^{-1} dr^2 - r^2 (d\theta^2 + \sin^2\theta d\varphi^2) + G dt^2 \}, \quad (C = 1), \qquad (1)$$

where $G(r) = 1 - 2mr^{-1} - {}^1/_3 \lambda r^2$ (2)

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

BOGOLYUBOVA, Irina Vladimirovna; ZAYKOV, B.D., doktor geograficheskikh nauk, redaktor; SHATILINA, M.K., redaktor; BRAYNINA, M.I., tekhnicheskiy redaktor

[Eroding streams and their extension over the territory of the U.S.S.R.] Selevye potoki i ikh rasprostranenie na territorii SSSR. Pod red. B.D.Zaikova. Leningrad, Gidrometeor. izd-vo, 1957. 150 p. (Erosion) (MIRA 10:10)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

Ca

9

Dephosphorization of Bessemer steel with liquid slags. P. Agaletzkii and S. Zaikov. *Stal* 4, No. 8, 21-9(1934); cf. Ferrin, *C. A.* 27, 3422.—Bessemer steel immediately after blowing was poured into a ladle contg. molten slag of compn.: SiO_2 7-10, CaO 29-51, FeO 17.5-22 and P_2O_5 0.14-0.34%. By thorough intermixing, the P content in the steel was decreased from 0.070-0.080 to 0.020-0.040%. The C, Si and Mn contents also were greatly decreased. H. W. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

PROCESSES AND PROPERTIES INDEX

7

A method of steel melting. B. T. Zaikov and K. H. Kostyuchenko. *Satsialist. Rekonstruktsiya i Nauka* 1936, No. 2, 152.—The theoretical method of A. A. Kuznetsov has been worked out and put into practice. It consists in leaving in the Thomas converter some of the metal that has been blown and making the next charge of cast iron. Then the process is carried on as usual with CaO introduced during the blowing. The output of the converter increases 15-20% and the S content of the product is lower. H. V. Shvartzberg

Cu

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

CA

9

Defects in the casting from below of shaft and band castings and means of their prevention. S. Ye. Zalkov. *Teorya i Prakt. Met.* 10, No. 6, 11-17(1938); *Chem. Zentr.* 1939, I, 4107.—The special defect investigated was the contamination of the casting by nonmetallic inclusions (sand). It was shown that these inclusions increase with increase in the viscosity of the metal, which in turn depends on the casting temp. and the rate of casting. It is also possible that the products of the reaction of the metal-MnO with the refractory material during the transporting of the metal to the casting pit form inclusions. Therefore, this operation must be carried out as rapidly as possible. The distribution of nonmetallic inclusions in the ingot depends upon the causes of their formation and the manner of casting. On the basis of these findings directions are given for improving casting methods which reduce the waste to 2.8-5.8%.

W. A. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964030006-2

CA

7

The preparation of slags in the cupola furnace. S. T. Zalkov. *Litejnoe Delo* 1939, No. 6, 20-2; *Khim. Referat. Zhur.* 1939, No. 11, 83.—Ti concentrate contained SiO_2 1.70, TiO_2 30.20, MnO 0.60, Al_2O_3 9.20 and FeO 40.0%. Blast-furnace slag obtained in the production of pig iron from Ural ores contained SiO_2 38.90, TiO_2 4.23, MnO 2.50, Al_2O_3 13.04 and FeO 2.20%. A mixt. of Ti concentrate 15, blast-furnace slag 21.5, refractory clay 22.5, Mn ore 19.8, burned dolomite 11.8 and river sand 0.4% gave in the cupola a synthetic slag for the reduction of Thomas metal; this slag contained SiO_2 38.42-67, TiO_2 0.38-8.11, MnO 9.57-12.0, Al_2O_3 14.0-17.57, FeO 0.11, CaO 12-17.16 and Mg 4.06-6.10%. The destruction of the lining of the cupola (made of semiacid grog) during the production of synthetic slag was insignificant. Oxides of Fe in the mixt. decreased from 10 to 2.3% during the melting of the slag.

W. R. Henn

METALLURGICAL LITERATURE CLASSIFICATION

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Zaikov, S. T.—EFFECT OF THE SPALLING RESISTANCE OF STEEL-CASTING REFRACTORIES ON THE POLLUTION OF STEEL BY SAND. *Ogneupory*, 7, 39-41 (1939).—Steel-casting refractories fired at 830° to 950° are more resistant to spalling than those fired at 1100°. The resistance to the effect of slags is practically the same in both cases.

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ZAYKOV, S. I.

18(0) PHASE I BOOK EXPLOITATION SOV/1728

Akademiya nauk SSSR. Institut metallurgii

Sovremennyye problemy metallurgii (Modern Problems in Metallurgy) Moscow, Izd-vo AN SSSR, 1958. 640 p. 3,000 copies printed.

Resp. Ed.: A.M. Samarin, Corresponding Member, USSR Academy of Sciences; Eds. of Publishing House: V.S. Rabevnikov, and A.N. Dernov; Tech. Ed.: T.V. Polyakova.

PURPOSE: This book is intended for scientific and technical personnel in the field of metallurgy.

COVERAGE: This is a collection of articles on certain aspects of Soviet metallurgy. The book is dedicated to Academician Ivan Pavlovich Bardin on the occasion of his 75th birthday. The book is divided into seven parts. The first part consists of two articles presenting a brief account of the biography and professional activity of the Soviet metallurgist. It includes an article by John Chipman, Nicholas Grant, and John Elliott (M.I.T., USA) describing their meeting with Bardin in Moscow and also his visit to the United States. The second part consists of three articles and deals with raw materials and fuels for the Soviet metallurgical industry. The third part represents the major portion of the book. It consists of 25 articles dealing with the various aspects of the metallurgy of pig iron and steel. The fourth part consists of two articles treating the metallurgy of nonferrous metals. The fifth part consists of three articles on the forming of metals. The sixth part consists of eight articles discussing certain aspects of physical metallurgy. The last part deals with general problems in the field of metallurgy. References are given after each article. No personalities are mentioned.

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ZAYKOV, S.P., kand. tekhn. nauk

Meeting of the scientific technological commission on expanding and improving converter steelmaking in the Ukraine. Met. i gornorud. prom. no.5:81-82 S-O '63. (MIRA 16:11)

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ZAYKOV, S.T.

TIMOFEYEV, Valentin Leont'yevich; TKACHENKO, Mikhail Kondrat'yevich; ZAYKOV, S.T., otvetstvennyy red.; LIBERMAN, S.S., red.izd-va; ANDREYEV, S.P., tekhn.red.

[The production of open-hearth steel; a textbook for schools and courses for foremen] Proizvodstvo martenovskoi stali; uchebnik dlia shkol i kursov masterov. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 211 p. (MIRA 11:2)
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