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[Metallurgy of steel; the open-hearth process. Technological part] Metallurgiia stali; martenovskii protsess. Chast' tekhnologicheskaia. Izd. 2-oe, perer. i dop. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 714 p. (MIRA 11:2)

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(Open-hearth process)

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[illegible]

AUTHOR: Trubin, M.I., Candidate of Technical Sciences

TITLE: Exhaust Ventilation Used for Electrolytic Aluminum [illegible]

PERIODICAL: Tsvetnyye metally, 1959, [illegible]

ABSTRACT: The intensification of the work of electrolyte [illegible] must be accompanied by improvements in the sanitary hygienic working conditions. The [illegible] brought about by widening [illegible] in the structure of the existing gas suction hood [illegible]. The simplest gas suction hood structure as [illegible] repairs and correctness in the [illegible] dynamic [illegible] shown in Fig 1 (1 - working platforms, 2 - [illegible] lids, 3 - clamps, 4 - joints, 5 - automatic [illegible] valve, 6 - exhaust, 7 - winding curtain, 8 - dust on the anode, 9 - alumina hoppers, 10 - trap doors for [illegible] the anode from dust). Fig 2 shows the [illegible] suction pipes attached to the electrolyte bath: a - with one gas suction hood above the anode [illegible] b - with four gas suction nozzles at the [illegible] bath (1 - gas suction hood above the anode, 2 - [illegible] 3 - exhaust, 4 - automatic [illegible] suction nozzle, 5 - [illegible]

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SOV/136-59-1 -16/18

Exhaust Ventilation Used for Electrolytic Aluminium Baths

that the best method for removing gases from electrolytic Al baths with a secondary current supply is a modified hood with one gas outlet. Gas suction pipes that can be regulated according to the quantity of gas given off must be incorporated. There are 2 figures and 3 Soviet references.

ASSOCIATION: NIIPS Akademii stroitel'stva i arkhitektury SSSR, g. Sverdlovsk (NIIPS, Academy for Construction and Architecture, USSR, Sverdlovsk)

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[Peat soils in Karelia, their drainage and cultivation] Torfianye pochvy Karelii, ikh osushenie i osvoenie. Petrozavodsk, Gos. izd-vo Karel'skoi ASSR, 1961. 84 p. (MIRA 15:2)
(Karelia--Peat soils)

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OVCHINNIKOV, Andrey Il'ich; GRIGOR'YEV, S.V., doktor geogr. nauk, kand. tekhn. nauk, nauchn. red.; TRUBIN, M.I., red.

[Water supply of hydroelectric power stations on the Suna and Vyg Rivers in Karelia] Opyt vodnogo khoziaistva sunskikh i vygskikh GES v Karelii. Petrozavodsk, Karel'skoe knizhnoe izd-vo, 1963. 97 p. (MIRA 18:7)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

SOV/136-59-6-11/24

AUTHOR: Trubin, M.I. Candidate of Technical Sciences

TITLE: Aerodynamic Studies of Local Resistances in the Exhaust Systems of Electrolytic Plants (Aerodinamicheskiye issledovaniya mestnykh scprotivleniy v vytyazhnykh sistemakh elektroliznykh tsekhov)

PERIODICAL: Tsvetnyye metally, 1959, Nr 6, pp 63 - 66 (USSR)

ABSTRACT: One of the methods of increasing production in plants possessing complex ventilation systems is to improve the aerodynamics of the network by reducing local resistances. The majority of the electrolytic plants have complex networks and therefore two junctions were investigated in the Ural'skiy alyuminiyevyy zavod (Ural Aluminium Works). Firstly, the connection of 4 main ventilators of diameter 1 500 mm with underground pipes and, secondly, a T-junction connecting the gas pipes of the electrolytic bath with the main pipes. A model was constructed and used for determining the coefficient of local resistance (Figure 1). Pressure was determined by a pneumatic tube and a micrometer TsAGI type A8, Nr 91. The general appearance of the apparatus is shown in Figures 2 and 3. In the

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Aerodynamic Studies of Local Resistances in the Exhaust Systems of Electrolytic Plants

underground channel there is an outlet from the main pipe which has a radius of curvature of 1 200 mm and a small diffuser for exhaust of gases. It was shown that the coefficient of local resistance was high at this point. The movement of currents is shown in Figure 4, which indicates where a layer of dust collects over the diffuser. A new construction has been devised for the joint of the main pipe to the underground gas channel. This is shown in Figure 5. The coefficient of local resistance has decreased almost to unity. The experimental apparatus for investigating T-joints is shown in Figure 6. The coefficient of local resistance was 2 but it could be reduced to as low as 1.2 by the use of a vane. Thus, on electrolytic plants a considerable decrease in the loss of pressure can be achieved. There are 6 figures.

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(Karelia—Crop yields) (Lime)
(Karelia—Fertilizers and manures)

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1. TSentral'noye byuro tekhnicheskoy informatsii Kemerovskogo soveta narodnogo khozyaystva.

(Kuznetsk Basin—Coal mines and mining)
(Mining research)

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The Congress on Reinforced Concrete Construction in Dresden. Sbor.mat. o nov.tekh. v stroi. 16 no.10:28-30 '54. (MLRA 8:2)
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Building machines and machinery. Nov.tekh.i pered. op. v strei. 18 no.7:31-32 Jl '56. (MLRA 9:9)
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New methods for exchanging collective experience. Nov.tekh. mont. i spets.rab. v stroi. 21 no.1:34-35 Ja '59. (MIRA 12:1)

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BONDAR', Ye.P., inzh.; VLASOVA, M.A., inzh.; KALININ, B.P., inzh.; KOPP, L.M., inzh.; SOKOLOVA, A.D., kand.tekhn.nauk; TSEGEL'SKIY, V.L., inzh.; UTENKOV, V.F., kand.tekhn.nauk [deceased]; BOGDANOV, S.I., inzh., nauchnyy red.; TRUBIN, V.A., glavnyy red.; SOSHIN, A.V., zam.glavnogo red.; GRINEVICH, G.P., red.; YEPIFANOV, S.P., red.; ONUFRIYEV, I.A., red.; KHOKHLOV, B.A., red.; ZIMIN, P.A., red.; SKVORTSOVA, I.P., red.izd-va; GOL'BERG, T.M., tekhn.red.; EL'KINA, E.M., tekhn.red.

[Handbook for the erection of reinforced-concrete elements of industrial buildings] Spravochnik po montazhu zhelezobetonnykh konstruktsii promyshlennykh zdanii. Pod red. B.P.Kalinina. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 315 p. (MIRA 14:3)

1. Moscow. Gosudarstvennyy institut po proyektirovaniyu stal'nykh konstruktsiy. (Reinforced concrete construction)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

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BODUNGEN, I.N., inzh.; VINOGRADOV, K.V., inzh.; VELLERSHTEYN, A.L., inzh.; GOL'DGOF, B.G., inzh.; KUZ'MIN, V.S., inzh.; KULIKOV, P.S., inzh.; LEBEDEV, N.N., inzh.; LEVI, S.S., kand.tekhn.nauk; ROZANOV, M.S., inzh.; SIDOROV, V.N., inzh.; SOKOLOV, D.V., inzh.; SLONIM, N.M., inzh., laureat Stalinskoy premii; EPSHTEYN, A.L., inzh.; ANTRUSHIN, B.D., inzh., nauchnyy red.; SIMAKOV, S.N., inzh., nauchnyy red.; TRUBIN, V.A., glavnyy red.; SOSHIN, A.V., zam.glavnogo red.; GRINEVICH, G.P., red.; YEPIFANOV, S.P., red.; ONUFRIYEV, I.A., red.; ZIMIN, P.A., red.; VDOVENKO, Z.I., red.izd-va; SHIROKOVA, G.M., red.izd-va; EL'KINA, E.M., tekhn.red.

[Power engineering handbook for construction work] Spravochnik energetika na stroitel'stve. Izd.2., perer. i dop. Pod red. N.N. Lebedeva. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1960. 736 p. (MIRA 13:11)
(Power engineering)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

STARUKHIN, N.M., inzh.; BOGATYKH, Ya.D., inzh.; TRUBIN, V.A., glav. red.; SOSHIN, A.V., zam. glav. red.; GRINEVICH, G.P., red.p YEPIFANOV, S.P., red.; ONUFRIYEV, I.A., red.; KHOKHLOV, B.A., red.; ZIMIN, P.A., red.; TSYURUPA, A.L., inzh., nauchnyy red.; GORDEYEV, P.A., red. izd-va; SHERSTNEVA, N.V., tekhn. red.

[Handbook on masonry operations] Spravochnik po kamennym rabotam. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 198 p. (MIRA 14:10)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. (Masonry)

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BARANOV, L.A.; GORBATOV, V.I.; YEVREINOV, D.V.; YERMAKOV, Ye.I.; PITERSKOV, N.I.; RYL'TSEV, A.N.; RYAZANTSEV, K.G.; TOROPOV, A.S.; TSEYTLIN, G.I.; YAROSHEV, D.M.; TRUBIN, V.A., glavnyy red.; SOSHIN, A.V., zam.glavnogo red.; RAKITIN, G.A., red.; GRINEVICH, G.B., red.; YEPIFANOV, S.P., red.; ONUFRIYEV, I.A., red.; KHOKHLOV, B.A., red.; ZIMIN, P.A., red.; TABUNINA, M.A., red.izd-va; OSENKO, L.M., tekhn.red.

[Manual on accident prevention and industrial sanitation during construction and repair operations] Spravochnoe posobie po tekhnike bezopasnosti i promsanitarii pri proizvodstve stroitel'no-montazhnykh rabot. Pod red. G.A.Rakitina. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1961. 359 p. (MIRA 14:4)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. (Construction industry--Hygienic aspects)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

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GRIGOR'YANTS, A.S.; GLADSHTEYN, D.A.; LANTSBURG, Ya.B.; TRUBIN, V.A., glav. red.; SOSHIN, A.V., zam. glav. red.; GRINEVICH, G.P., red.; YEPIFANOV, S.P., red.; ONUFRIYEV, I.A., red.; KHOKHLOV, B.A., red. ZIMIN, P.A., red.; KANTSEL', Ya.O., nauchnyy red.; SHIROKOVA, G.M., red. izd-va; SHERSTNEVA, N.V., tekhn. red.

[Handbook on the consumption of spare parts and materials in operating and repairing building and road machinery] Spravochnik po raskhodu zapasnykh chastei i materialov dlia ekspluatatsii i remonta stroitel'nykh i dorozhnykh mashin. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 399 p. (MIRA 14:10)
(Building machinery--Maintenance and repair)
(Road machinery--Maintenance and repair)

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IVYANSKIY, G.B., kand. tekhn. nauk; POLYAKOV, V.I., kand. tekhn.nauk; RAYPENBERG, S.M., inzh.; CHEREPAKHIN, N.V., inzh.; PROSKURNINA, V.P., red.; TRUBIN, V.A., glav. red.; SOSHIN, A.V., zam. glav. red.; GRINEVICH, G.P., red.; YEPIFANOV, S.P., red.; ONUFRIYEV, I.A., red.; KHOKHLOV, B.A., red.; ZIMIN, P.A., red.; PEREVALYUK, M.V., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Erection of completely precast apartment houses]Montazh polnosborrykh zhilykh zdanii; spravochnoe posobie. Pod red. V.P. Proskurnina. Moskva, Gosstroiizdat, 1962. 94 p. (MIRA 15:11)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. (Apartment houses) (Precast concrete construction)

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GEL'MAN, A.S.; GRINEVICH, G.P., prof.; GRINEVICH, G.G., ZOTOV, V.P.; KOMAROV, G.V.; PAVLOV, S.M.; FIRMON, A.V.; TRUBIN, V.A., glav. red.; SOSHIN, A.V., zam. glav. red.; YEPIFANOV, S.P., red.; ONUFRIYEV, I.A., red.; KHOKHLOV, B.A., red.; ZIMIN, P.A., red.; KHOMOSHCH, I.L., inzh., red.; NAUMOVA, G.D., tekhn. red.

[Handbook on loading, unloading, and conveying operations in construction] Spravochnik po pogruzochno-razgruzochnym i transportnym rabotam na stroitel'stve. Pod red. G.P.Grinevicha. Moskva, Gosstroiizdat, 1962. 376 p. (MIRA 15:9)
(Material handling) (Building materials)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

BOBKOV, Anatoliy Sergeyevich, kand. tekhn. nauk, dots.; TRUBIN, V.A., prof. [deceased], retsenzent; MARTYNOV, A.P., red.

[Principles of the construction of industrial buildings and structures for the chemical industry] Osnovy stroitel'stva promyshlennykh zdanii i sooruzhenii khimicheskoi promyshlennosti. Moskva, Vysshaia shkola, 1965. 263 p. (MIRA 18:7)

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Monograph

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Trubin, V. N. (Candidate of Technical Sciences); Shelekhov, V. A. (Engineer), eds.

Production of large forgings (Kovka krupnykh pokovok), pt. 2. Moscow, Izd-vo "Mashinostroyeniye", 1965, 294 p. illus., biblio. Errata slip inserted. 2,500 copies printed.

TOPIC TAGS: metal, carbon steel, alloy steel, metal forging, metal heat treatment, high quality steel, material deformation

PURPOSE AND COVERAGE: This book presents the technology of the production of large forgings. The effect of forging and of deformation conditions upon the quality of forged pieces is described as taken from studies made by heavy machine construction factories of the Soviet Union. Practical recommendations are given for perfecting heat conditions and forging technology in order to increase the quality of forging and decrease labor expenditure. This book is recommended for technical engineers in forging plants, technological bureaus of heavy machine construction factories, and for those in research organizations. It can also be useful to students of higher education.

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

TARNOVSKIY, I.Ya.; TRUBIN, V.N.

Using variational principles to investigate metal flow into die cavities during the upsetting of large steel ingots. Trudy Ural. politekh. inst. no.127:105-113 '61. (MIRA 16:8)

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TARNOVSKIY, Iosif Yakovlevich; POZDEYEV, Aleksandr Aleksandrovich; GANAGO, Oleg Aleksandrovich; KOLMOGOROV, Vadim Leonidovich; TRUBIN, Valeriy Nikolayevich; VAYSBURD, Rual'd Arkad'yevich; TARNOVSKIY, Valeriy Iosifovich; GOROBINCHENKO, V.M., red. izd-va; BEKKER, O.G., tekhn. red.

[Theory of working metals by pressure; variational methods of calculating forces and deformations] Teoriia obrabotki metallov davleniem; variatsionnye metody rascheta usilii i deformatsii. [By] I.IA.Tarnovskii i dr. Moskva, Metallurgizdat, 1963. 672 p. (MIRA 17:1)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

PHASE I BOOK EXPLOITATION SOV/6162

Trubin, V. N., Candidate of Technical Sciences, and I. Ya. Tarnovskiy, Doctor of Technical Sciences, eds.

Kovka krupnykh pokovok; rezul'taty issledovaniya tekhnologicheskikh rezhimov (Production of Heavy Forgings; Results of a Study of Technological Methods). Moscow, Mashgiz, 1962. 223 p. 3800 copies printed.

Reviewer: O. A. Ganago, Candidate of Technical Sciences; Tech. Ed.: N. A. Dugina; Executive Ed. of Ural-Siberian Department (Mashgiz): E. L. Kolosova, Engineer.

PURPOSE: This book is intended for engineering personnel of forging shops and engineering and design offices at heavy-machinery plants, as well as for those working in scientific-research and planning organizations. It may also be useful to students at higher educational establishments.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

Production of Heavy Forgings; (Cont.) SOV/6162

COVERAGE: The book reviews technological problems of forging large steel ingots. The effect of reduction and conditions of deformation on the quality of forgings is discussed on the basis of research work done at heavy-machinery plants of the USSR. The book offers practical suggestions on improving the quality of large forgings and reducing the amount of labor required to produce them. I. Ya. Chernikhova, V. I. Tarnovskiy, and V. P. Bakharev took part in preparing the copy for publication. There are 193 references, mostly Soviet.

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Production of Heavy Forgings; (Cont.) SOV/6162

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SUBJECT: Metals and Metallurgy

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

SOV/137-59-1-1553

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 207 (USSR)

AUTHORS: Tarnovskiy, I. Ya., Trubin, V N.

TITLE: Investigation of the Spread During Rolling on the Basis of Variational Principles (Issledovaniye ushireniya pri prokatke s ispol'zovaniyem variatsionnykh printsipov)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chern. metallurgiya, 1958, Nr 5, pp 145-161

ABSTRACT: Ref. RZhMet, 1958, Nr 12, abstract 24407

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBIN, V.N.; CHERNIKHOVA, I.Ya.

Effect of conditions of heat treatment on the anisotropy of mechanical properties of forged steel. Kuz. shtam. proizv. 3 no. 5:5-9 My '61. (MIRA 14:5)
(Steel—Heat treatment) (Anisotropy)

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TRUBIN, V.N.

Technological conference on making large forgings. Kuz.-shtam. proizv. 2 no.8:48 and 3 of cover Ag '60. (MIRA 14:2)
(Forging—Congresses)

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ZLATKIN, Moisey Grigor'yevich; DOROKHOV, Nikolay Nikolayevich; LEBEDEV, Nikolay Ivanovich; MAKAROV, Nikolay Yevgen'yevich; NEYSHTAT, Zyama Fal'kovich; SYCHEV, Arkadiy Mikhaylovich; SKLYUYEV, P.V., kand. tekhn. nauk, retsenzent; TASHCHEV, A.K., kand. tekhn. nauk, retsenzent; TRUBIN, V.N., kand. tekhn. nauk, retsenzent; VSHIVKOV, P.P., inzh., retsenzent; KON'KOV, A.S., inzh., retsenzent; LEBEDEV, N.S., inzh., retsenzent; POTEKUSHIN, N.V., inzh., retsenzent; TYAGUNOV, V.A., doktor tekhn. nauk, red.; SOKOLOV, K.N., kand. tekhn. nauk, red.; SKORNYAKOV, V.B., red.; YAROSHENKO, Yu.G., red.; ZAKHAROV, B.P., inzh., red.; AMIROV, I.M., inzh., red.; MYSHKOVSKIY, V.A., inzh., red.; SHELEKHOV, V.A., inzh., red.; BOGOMOLOV, O.P., inzh., red.; KATS, I.S., inzh., red.; LEVANOV, A.N., inzh., red.; DUGINA, N.A., tekhn. red.

[Handbook on forging practices] Spravochnik rabochego kuznechno-shtampovochnogo proizvodstva. By M.G.Zlatkin i dr. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 776 p. (MIRA 14:9)

(Forging—Handbooks, manuals, etc.)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBIN, V.N.; STEPANENKO, V.I.

Calculating strip deformation during forging with rhombic die blocks. Izv. vys. ucheb. zav.; chern. met. 5 no.10:88-95 '62. (MIRA 15:11)

1. Ural'skiy politekhnicheskiy institut.
(Forging)

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TARNOVSKIY, I.Ya.; LYU KHAY-KUAN' [Liu Hai-k'uan]; TRUBIN, V.N.

Mechanism of and conditions for the appearance of the "forging cross." Izv. vys. ucheb. zav.; chern. met. 4 no.7:112-120 '61. (MIRA 14:8)

1. Ural'skiy politekhnicheskiy institut
(Forging--Defects)

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TRUBIN, V.N.; TARNOVSKIY, I.Ya.

Folding-in internal metal defects in upset forging. Kuz.-shtam. proizv. 4 no.1:6-11 Ja '62. (MIRA 17:3)

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LYASHKOV, V.B.; TRUBIN, V.N.

Some diagrams of metal flow during rolling. Izv.vys.uchebn.zav., chern.met. 5 no.6:96-99 '62. (MIRA 15:7)

1. Ural'skiy politekhnicheskiy institut.
(Rolling (Metalwork)) (Deformations (Mechanics))

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TRUBIN, V.N., kand.tekhn.nauk, red.; TARNOVSKIY, I.Ya., doktor tekhn.nauk, red.; GANAGO, O.A., kand.tekhn.nauk, retsenzent; DUGINA, N.A., tekhn. red.

[Making large forgings; results of studying industrial procedures]Kovka krupnykh pokovok; rezul'taty issledovaniia tekhnologicheskikh rezhimov. Moskva, Mashgiz, 1962. 223 p. (MIRA 15:8)

(Forging)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBIN, V.N.; CERNICHOVA, I. J.

Effect of heat treatment conditions on the anisotropy of mechanical properties of freely forged steel. Stroj vyr 10 no. 3:131-134. '62

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

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188200 14118

AUTHORS: Trubin, V.N., Chernikhova, I.Ya.

TITLE: The effect of heat treatment on the anisotropy of mechanical properties in forged steel

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 5, 1961, 5-9

TEXT: Present day opinions on the effect of heat treatment on the well-known phenomenon of the anisotropy of mechanical properties in forged steel are varied and contradictory. An experimental investigation has been carried out to verify and compare various heat treatment methods. A 320-mm diameter forging made from a 6.65-ton basic open-hearth steel ingot, was (after bileting) upset to half its height, and drawn with 11.8 reduction. Four specimen groups were subjected to: 1) homogenizing and annealing; 2) homogenizing, annealing, quenching and tempering; 3) annealing; 4) quenching and tempering. Homogenizing consisted in heating up to 1250°C, soaking for 12 hours in a shop furnace and cooling in still air. Subsequent heat treatment was carried out in a laboratory furnace: annealing with heating up to 810°C and soaking for 2 hours, cooling in the furnace to 650°C, then in still air; quenching; heating up to 810°C and soaking for 2 hours, quenching in

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S/182/61/000/005/001/006
D038/D112

The effect of heat treatment...

water; tempering: heating up to 650°C, soaking for 3 hours, and cooling in still air. The results are illustrated in a graph (Fig. 2). After annealing, clearly marked bands were observed in the microstructure of the specimen. Coarse ferrite bands were seen in the backgrounds of sections with a predominantly lamellar pearlite, with band orientation in the direction of drawing. It is probable that hardly perceptible light streaks in the metal were parts with a lower carbon content. Nonmetallic inclusions were elongated in the direction of the metal flow. Annealed steel subjected to preliminary homogenizing had a perfectly identical lengthwise and crosswise structure; nonmetallic inclusions remained long. It is stated that the anisotropy of properties in the investigated steel resulted from the elongation of nonmetallic inclusions and structural banding (dendritic segregation). The structural banding can be decreased by homogenizing, which increases the diffusion processes and contributes to a certain levelling of the chemical composition in steel. The impact resistance and reduction in area of cross-section specimens increased 25-30% after homogenizing. In quenched and tempered steel nonmetallic inclusions were surrounded by a hard brittle structure. Conclusions. The anisotropy of mechanical properties in steel subjected to hot plastic deformation (drawing in one direction) depends on

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S/182/61/000/005/001/006
D038/D112

The effect of heat treatment...

the final heat treatment. Homogenizing, irrespective of the final treatment, decreases the anisotropy of mechanical properties in forged steel. There are 6 figures, 1 table, and 6 Soviet references.

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The effect of heat treatment...

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S/182/61/000/005/001/006
D038/D112

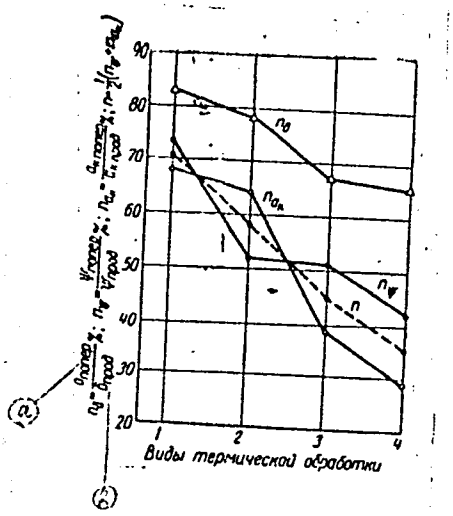

Fig. 2. The effect of heat treatment on the anisotropy of mechanical properties in 45-steel:
1 - homogenizing and annealing;
2 - annealing; 3 - homogenizing, annealing, quenching and tempering;
4 - quenching and tempering;
a - crosswise; b - lengthwise.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBIN, V.N., Cand Tech Sci--(diss) "Study of the deformed state of metall ~~upon~~ during forging and rolling with the utilization of variation principles." Sverdlovsk, 1958. 19 pp (Min of Higher Education USSR. Ural Polytech Inst im S.M. Kirov), 100 copies (KL,25-58,115)

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

S/182/60/000/008/008/010
A161/A029

AUTHOR: Trubin, V.N.

TITLE: Scientific-Technical Conference on the Forging of Large Forgings

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, 1960, No. 8, pp. 48 - 49

TEXT: The conference was the second on the subject and was convened in May 1960 in Sverdlovsk. Delegates from 15 works for heavy machine building and 10 institutes took part. The results of research carried out jointly by works and institutes during 1959 - 1960 in accordance with the general plan set up at the first conference were discussed. The first conference took place in December 1958 also in Sverdlovsk. Planned research was done by 8 institutes and 10 works. Seven of the works are named: "Bol'shevik" (Leningrad); im. Lenina (imeni Lenin) in Perm'; Uralmash (Sverdlovsk); Novo-kramatorskiy (Novo-Kramatorsk) in Kramatorsk; Novoye Sormovo (New Sormovo) in Gor'kiy; Izhorskiy (Izhora Works) and Nevskiy Works (Leningrad). The institutes studied mainly the stress-strain state of metal in the forging process, and the works investigated the correlation of mechanical properties, macrostructure and soundness of forgings with deformation degree and forging system. The works studied forgings from plain carbon,

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S/182/60/000/008/008/010
A161/A029

Scientific-Technical Conference on the Forging of Large Forgings

alloy and high-alloy steel forged from ingots of 1.5 to 45 tons and of different shape. Shafts, disks and stamped cubes were studied in drawing and swaging and in a combination of these two operations. The committee organized at the first conference in December 1958 and consisting of 19 persons has generalized some of the joint work results and gave practical recommendations that will raise the output of some forgings, reduce the fuel consumption for heating and lead to more extensive use of manipulators. One recommendation is to reduce the deformation degree to 2.5 in some cases of drawing. It had been proven in some research works that intermediate swaging is not advisable for improving the mechanical properties in forgings of shaft and disk type. It has been noted that the main purpose of forging (as far as it concerns the metal quality) is to fill out the internal microscopic and macroscopic cavities in ingots. Therefore, particular attention has been paid to further improvement of steel smelting and teeming, and the correlation of the ingot dimensions. Joint work will be continued. A coordinating plan has been approved for 1960 - 1961. The following conference on the production of large forgings is planned for March - April 1962.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

S/182/62/000/001/002/004
D038/D113

AUTHORS: Trubin, V.N. and Tarnovskiy, I.Ya.

TITLE: Closing of internal defects in metal by upsetting

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 1, 1962, 6-11

TEXT: The author deals with research on the closing of internal defects in large forgings by upsetting, since the mechanism of this process has not been sufficiently investigated. Upsetting tests conducted on blanks consisting of compound lead templates provided with artificial defects had demonstrated that the closing of internal defects during the stress state similar to linear strain occurred only along the forging height, and the radial dimensions of defects had increased. It was impossible to close the internal defects in the shape of through holes during the linear strain. However, the closing of internal defects located along the height, and in radial directions was made possible by all-round compression. During uneven upsetting, the internal defects closed only in the central portion of the forging, i.e. in the zone of greatest deformation. The shape of

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Closing of internal S/182/62/000/001/002/004
D038/D113

upsetting plates and the presence of an aperture in the lower upsetting plate affect the closing of internal defects. A description of upsetting on flat plates with and without oil and graphite lubricant, the mechanism of the closing of internal defects, and upsetting of a 34ХН1М (34KhN1M) steel blank are included. The work of A. Tomlinson and I. Stringer (Ref. 1: The Closing of Internal Cavities in Forgings by Upsetting, Journal of the Iron and Steel Institute, March 1958), and that of M.V. Rastegayev (Ref. 2, Vestnik mashinostroyeniya, no. 3, 1960) is mentioned in the article. There are 10 figures and 3 references: 2 Soviet-bloc and 1 non Soviet-bloc. The English-language reference is: A. Tomlinson, I. Stringer. The closing of Internal Cavities in Forgings by Upsetting, Journal of the Iron and Steel Institute, March, 1958.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

S/182/60/000/009/001/012
A161/A029

AUTHORS: Lyu Khay-kuan'; Tarnovskiy, I.Ya.; Trubin, V.N.

TITLE: Metal Deformation in Draw-Forging of Large Billets on Flat Dies

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, 1960, No. 9, pp. 1 - 5

TEXT: A theoretical investigation of the deformation distribution in metal through the billet cross section area in the forging process on a flat die in a single pass had been made previously (Refs. 3 and 4). The present article gives information on the results of a systematical laboratory investigation with lead billets forged by different schedules beginning with the simplest case of drawing in a single pass to drawing with high reduction of area. Certain deformation laws were derived and practical recommendations are given. The billets were made of two halves, a coordinate grid was traced on the parting surfaces and the halves were joined by Wood alloy. Deformation observed on the grid in the center, in different layers and along the billets is illustrated by photographs and curves. The following facts were noted: 1) The relation of feed to the billet thickness has the highest effect on the deformation distribution in billet cross section and length. Within the studied $\frac{l}{h}$ range (from 0.25 to 1) the non-

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A161/A029

Metal Deformation in Draw-Forging of Large Billets on Flat Dies

uniformity of deformation increased with growing $\frac{l}{h}$ ratio and was highest from 0.4 on. Still, to avoid longitudinal tension stresses that had been revealed in a previous investigation (Ref. 3) it is advised to take $\frac{l}{h}$ between 0.5 and 0.7, and take a higher $\frac{l}{h}$ ratio for less plastic metal which might develop internal ruptures. If metal is sufficiently plastic and the center must be well forged through, lesser $\frac{l}{h}$ values are to be chosen. For hammer forgings, that usually are taken with length/height ratio above 1, the optimum feed must be chosen for other reasons that are not considered here. 2) The more frequent is the displacement of the feed limit in forging with several passes, the more uniform is the deformation in metal. It is therefore advised to use more passes with less deformation in each, and change the feed boundaries frequently. This is particularly important in forging with a low degree of deformation, i.e., when the unevenly forged structure spoils the metal quality. In case of forging with a high deformation degree it is better not to increase the number of passes at the cost

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A161/A029

Metal Deformation in Draw-Forging of Large Billets on Flat Dies

of swaging degree in a pass, for a lower number of passes will be sufficient. There are 7 figures and 4 references: 3 Soviet and 1 English.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

SOV/123-59-14-54870

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 14, pp 58 - 59 (USSR)

AUTHORS: Tarnovskiy, I.Ya., Trubin, V.N.

TITLE: Investigation of Widening During the Rolling Process by the Variation Principles

PERIODICAL: Tr. Mezhvuz. nauchno-tekhn. konferentsii na temu: "Sovrem. dostizh. prokatn. proiz-va". Leningrad, 1958, pp 29 - 42

ABSTRACT: Based on the principle of the least full energy of deformation, a theoretical formula for the calculation of widening during the rolling process was derived. An experimental checking of the formula was carried out by rolling specimens of soft carbon steel on a mill with steel rollers of 130 and 210 mm in diameter. Before being rolled, the specimens were heated up to 1,100°C on an electric contact heating installation. The rolling speed was 0.3 m/sec. The widening was determined both by the direct measuring of the width of the strip before and after the rolling process, taking into account the convexity

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SOV/123-59-14-54870

Investigation of Widening During the Rolling Process by the Variation Principles

of the lateral surface, and by the constancy of the strip volume. The experimental checking of the theoretical formula showed satisfactory results. Six figures, seven references.

M.G.N.

Card 2/2

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

SOV/137-58-12-24407

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 65 (USSR)

AUTHORS: Tarnovskiy, I. Ya., Trubin, V. N.

TITLE: An Investigation of Rolling Spread by Means of Variational Principles (Issledovaniye ushireniya pri prokatke s ispol'zovaniyem variatsionnykh printsipov)

PERIODICAL: Tr. Mezhvuz. nauchno-tekhn. konferentsii na temu: "Sovrem. dostizh. prokatn. proiz-va". Leningrad, 1958, pp 29-42

ABSTRACT: The most important principle of the mechanics of a deformable body, namely, the principle of minimum total energy of deformation (D), is used to derive a theoretical formula for analysis of rolling spread. After simplification, it appears as follows: $\Delta B / \Delta H = [(0.53 B_0/\ell) \cdot (H_c/\ell + 1.[illegible]\mu)]/[illegible] + 0.8\mu(1+1.16) B_0^2/\ell^2 + 0.1 B_0^2/\ell^2 (2 + H_c/\ell)]$, where ΔB is the spread, ΔH is the reduction, B_0 is the billet width, ℓ is the length of the contact area, H_c is the average height of the contact area, and is the coefficient of friction. Tests confirm the applicability of this formula in practical calculations.

V. D.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

SOV/137-58-12-24408

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 65 (USSR)

AUTHORS: Tarnovskiy, I. Ya., Trubin, V. N.

TITLE: The Zones of Adhesion and Slip on the Contact Surfaces of the Contact Area in Rolling (Zony prilipaniya i skol'zheniya na kontaktnykh poverkhnostyakh ochaga deformatsii pri prokatke)

PERIODICAL: Tr. Mezhvuz. nauchno-tekhn. konferentsii na temu: "Sovrem dostizh. prokatn. proiz-va". Leningrad, 1958, pp 43-47

ABSTRACT: Coordinate grids are applied to the lower and upper contact surfaces of Pb strip. The strip is rolled so as to produce incomplete rolling of the coordinate grid embracing the contact area. The length of the zone of adhesion (ZA) is determined by the dimensions of the coordinate grid at the center of the strip. The relative length of the ZD, ℓ_n/ℓ, may be considerable ($\ell_n/\ell = 0.60-0.78$) at low length-to-height ratios ℓ/H_c. At some critical value, $\ell/H_c = K$, the length of the ZA is sharply reduced, and when $\ell/H_c > K$, there is virtually no ZA. Test data confirm the fact that when B_c/H_c ratios are high, the length of the ZA is primarily dependent upon the ℓ/H_c, and that there is no

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The Zones of Adhesion and Slip on the Contact Surfaces of the Contact Area (cont.)

ZA when $\ell/H_c > K$. When narrow strip is rolled, the ZA is of virtually identical length both down the middle of the strip and along its edges. As the width of the strip increases the rigid ends cause tensile stresses to develop along the edges, with the result that the length of the ZA at the edges diminishes and the ZA outline changes. At constant $\Delta H/D$, all other conditions being equal, a diminution in B_cH_c and in $\Delta H/D$ facilitates the development of the ZA. When $\ell/H_c < K$, the length of the ZA is great and may amount to $\ell_n/\ell = 0.7-0.95$.

Ya. G.

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Trubin, V.N.

PHASE I BOOK EXPLOITATION SOV/3226

Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya na temu: "Sovremennyye dostizheniya prokatnogo proizvodstva."

Trudy...(Transactions of the Intercollegiate Scientific and Technical Conference on Recent Achievements in the Rolling Industry) Leningrad, 1958. 251 p. 1,000 copies printed.

Sponsoring Agencies: Leningradskiy politekhnicheskiy institut im. M.I. Kalinina, Nauchno-tekhnicheskoye obshchestvo mashinostroiteley, Leningradskoye otdeleniye, and Nauchno-tekhnicheskoye obshchestvo metallurgov, Leningradskoye otdeleniye.

Resp. Ed.: V.S. Smirnov, Doctor of Technical Sciences, Professor; Ed.: N.N. Pavlov.

PURPOSE: These proceedings of the conference are intended for specialists in the rolling industry.

COVERAGE: The articles of this collection cover various theoretical and practical problems of rolling, such as: pressure, spread, efficiency of rolls, determination of deformation, forces required, pass design, optimum conditions for rolling, experiences of various plants, modernization of equipment, aluminum-clad steel, and rolling of nonferrous metals. No personalities are mentioned. References appear after each article.

Smirnov, V.S. [Leningradskiy politekhnicheskiy institut im. M.I. Kalinina (Leningrad Polytechnical Institute im. M.I. Kalinin)] Recent Achievements in the Rolling Industry 5

Shvayun, V.L. [SKMZ im. Ordzhonikidze, Kramatorsk] Old Kramatorsk Machine-Building Plant in the Drive for Technical Progress 15

Chekmarev, A.P., L.Ye. Kapturov, and P.L. Klimenko. [Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)] Experimental Investigation of Unit Pressure in Rolling on Plane and Grooved Rolls 20

Tarnovskiy, I.Ya., and V.N. Trubin. [Ural'skiy politekhnicheskiy institut im. S.M. Kirova (Urals Polytechnical Institut im. S.M. Kirov), Sverdlovsk] Study of Spread in Rolling, Using Variational Principles 29

Tarnovskiy, I.Ya., and V.N. Trubin. [Ural'skiy politekhnicheskiy institut im. S.M. Kirova (Urals Polytechnical Institute im. S.M. Kirov), Sverdlovsk] Zones of Sticking and Slipping on the Contact Surfaces of the Focus of Deformation in Rolling 43

Starchenko, D.I. [Zhdanovskiy metallurgicheskiy institut (Zhdanov Metallurgical Institute)] Forward Slip, Retardation and Spread in Rolling With Normal and Extra High Drafts 48

Nut'yev, M.S. [Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)] Determining Spread During Rolling in Simple Passes 62

Arkulis, G.E. [Magnitogorskiy gornometallurgicheskiy institut im. G.I. Nosova (Magnitogorsk Mining and Metallurgy Institute im. G.I. Nosov)] Method of "Surface Marks" for Calculation of the Internal Nonuniformity of Deformation in Upsetting 66

Vydrin, V.N. [Chelyabinskiy politekhnicheskiy institut (Chelyabinsk Polytechnical Institute)] Rolling in Rolls of Unequal Diameter 71

Golubev, T.M. [Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnical Institute)] Rolling With Constant Pressure 75

Dinnik, A.A. [Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institut)] Calculation of Metal Pressure on Rolls in Hot Rolling of Steel 81

Pavlov, N.N. [Leningradskiy politekhnicheskiy institut im. M.I. Kalinina (Leningrad Polytechnical Institut im. M.I. Kalinin)] Calculating Forces in Shape Rolling by the Equivalent Strip Method 91

Klimenko, V.M. [Institut chernoy metallurgii AN USSR (Institute of Ferrous Metallurgy, AS Ukr SSR), Kiyev] Design of Passes with Pinching Effect [top and bottom of pass have small tapers] and the Experimental Determination of Side Pressure of Work in Rectangular Passes 95

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBIN, V.N.; TARNOVSKIY, I.Ya.

Conditions on contact surfaces in rolling on smooth rolls. Trudy Ural.politekh.inst. 73:246-250 '58. (MIRA 12:8)
(Rolling (Metalwork)) (Surfaces (Technology))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

LYU KHAY-KUAN' [Liu Hai-k'uan]; TARNOVSKIY, I.Ya., TRUBIN, V.N.

Peening of the metal when drawing large blanks on flat dies. (MIRA 13:9)
Kuz.-shtam.proizv. 2 no.9:1-5 S '60.
(Drawing (Metalwork))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TARNOVSKIY, I.Ya., doktor tekhn.nauk, prof.; TRUBIN, V.N., inzh.

Investigating expansion during rolling using variation principles. Izv. vys. ucheb. zav.; chern.met. no.5:145-161 My '58. (MIRA 11:7)

1.Ural'skiy politekhnicheskiy institut.
(Rolling (Metalwork)) (Deformations (Mechanics))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

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L 18465-63 EWP(k)/EWP(q)/EWT(m)/BDS AFFTC/ASD Pf-4 JD/HW

ACCESSION NR: AR3006448 S/0124/63/000/008/V032/V032

64

SOURCE: RZh. Mekhanika, Abs. 8V250

AUTHOR: Trubin, V. N.; Potapov, A. I.

TITLE: Strain and mechanical properties of metal during the forging of large ingots

19 18

CITED SOURCE: Tr. N.-i. i proyektno-konstrukt. in-ta gorn. i obogatit. mashinostr. sb. 2, 1960(1961), 69-80

TOPIC TAGS: ingot, strain, forging, steel, deformation, mechanical property, lead, simulation, joint

TRANSLATION: Results of the experimental study of the effect of the size of the plastic deformation occurring, during the forging of ingots, on the mechanical properties of the metal are given. The experiments were conducted on ingots of steel 40 and steel 34XHM. The distribution of deformation with respect to the cross section of the ingot was studied by the method of simulation, by indirect deformation of joined lead samples having in the coordinate lattice in the joining plane. Practical recommendations are given for choice of the degree of deformation

Card 1/2

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of the ingot during forging for improvement of its mechanical properties. E. M. Tret'yakov

DATE ACQ: 28Aug63 SUB CODE: ML, AP ENCL: 00

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBIN, Yu.K., insh.

Developing multifuel engines. Trakt. i sel'khozmash. 30 no. 12:39-40 D '60. (MIRA 13:12)

(Gas and oil engines)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

SHCHUROV, V.I.; TRUBINA, A.F.

Solving the problem on fluid flow toward the well in a fractured layer by electrolytic modeling. Trudy VNII no.16:86-105 '58. (MIRA 11:12)

(Geological modeling) (Hydraulics)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBINA, A.V. (Leningrad)

Our experience. Med.sestra 18 no.7:39-40 Jl '59. (MIRA 12:10)

(NURSES AND NURSING)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBINA, K. N. Cand Geol-Min Sci -- "The laterite erosion crust and its connection with bauxites. According to the examples of northern-Onega and Moscow-region bauxite deposits." Mos, 1961 (Min of Higher and Secondary Specialized Education RSFSR. Mos Geol Prospecting Inst im S. Ordzhonikidze).

(KL, 4-61, 190)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBINA, K. N.

"Ancient Weathered Laterite Crust of the North-Onega Bauxite Deposits" p.319

"Bauxite Deposits of the Podmoskovnyy Basin" p.335

Mineralogy and Origin of Bauxites, Moscow, Izd-vo AN SSSR (otd. geologo-geograf. nauk) 1958, 488pp.

This collection of articles by various authors on the mineralogy and geochemistry of bauxites appeared as a result of 1955 conf. on the origin of bauxite (Chairman, Acad. N. M. Stakhov)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBINA, K.N.

Paragenesis of titanium and aluminum in weathering surfaces and products of their redeposition. Lit.i pol.iskop. no.2:218-231 '63. (MIRA 17:10)

1. Laboratoriya osadochnykh porod pri Gosudarstvennom geologicheskom komitete SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756810014-8

TRUBINA, L. M. Doc Cand Med Sci -- (diss) " ~~Improvement~~ Refinement of ~~the~~ laboratory diagnostics of hydrophobia." Mos, 1957. 16 pp 22 cm. (Academy of Medical Sciences USSR), 200 copies (KL, 21-57, 107)

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TRUBINA, L.M.

E-3

USSR/Virology. Human and Animal Viruses.

Abs Jour: Ref. Zhur.-Biol., No 7, 1957, 28724.

Author : Trubina, L.M.
Inst : Not given.
Title : Serum Diagnosis in Rabies.

Orig Pub: K voprosu o serodiagnostike beshenstva. Vopr. virusologii, 1957, No 3, 161-165.

Abstract: A comparative study was conducted of the suitability of RSK [reaction of complement fixation], AVP and RGA reactions for rapid postmortem rabies diagnosis. It was shown that RSK in the cold of antigens either of a fresh brain or one preserved in neutral 50% glycerine (up to 1½ years) of animals dead of rabies with hyperimmune rabbit sera may be utilized for speedy orientational diagnosis of rabies, particularly in

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USSR/Virology. Human and Animal Viruses. E-3

Abs Jour: Ref. Zhur-Biol., No 7, 1957, 28724.

cases when investigation is difficult. For these purposes, the AVB and RGA reactions were useless.

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DREIZIN, R.S.; TRUBINA, L.M.

Morphological changes in tissue cultures infected with adenoviruses. Acta virol. Engl. Ed. Praha 2 no.2:84-90 Apr-June 58.

1. Department of Influenza and Acute Inflammations, Ivanovsky Institute of Virology, Academy of Medical Sciences of the U.S.S.R., Moscow.

(TISSUE CULTURES,
morphol. changes caused by presence of adenoviruses)

(ADENOVIRUS,
infect. of tissue cultures causing morphol. changes in tissues)

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MASLOVA, Ye.B ; TRUBINA, V.I.

Lysogenicity of the paratyphoid fever A and B bacteria. Zhur. mikrobiol., epid. i immun. 41 no.11:73-79 '65. (MIRA 18:5)

1. Moskovskiy institut vaktsin i syvorotok imeni Mechnikova.

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TRUBINA, Yelizaveta Il'inichna; MANEVSKIY, A.D., red.; NAZAROVA, A.S., ~~tekhn. red.~~

[Children should love nature] Deti dolzhny liubit' prirodu. Moskva, Izd-vo "Znanie," 1961. 37 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.11, Pedagogika, no.16) (MIRA 14:10)

(Nature study)

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TRUBINA, Ye.K., inzh.

Exchange of water between the transit flow and the eddy during the controlled widening of calm steady pressureless flows of a homogeneous liquid. Izv. VNIIG 65:91-106 '60. (MIRA 14:5)
(Hydrodynamics)

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