"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, Aleksey Yakovlevich, doktor tekhn. nauk, prof.; CHARNKO, D.V., prof., retsenzent; BUTUZOV, Ye.A., kand. tekhn. nauk, dotsent, nauchnyy red.; BALANDIN, A.F., red. izd-va; DOBRITSYNA, R.I., tekhn. red.

[Fundamentals of technological processes in machining machine parts] Osnovy tekhnologii mekhanicheskoi obrabotki detalei mashin. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 198 p. (MIRA 14:9)

(Mechanical engineering) (Metalwork)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

TORNER, R.V.; VEYKHANSKIY, P.G.; MALKIN, A.Ya.

Theory of the design of single-screw extruders. Plast.massy no.5:47-49 '61. (MIRA 14:4)
(Plastics industry--Equipment and supplies) (Extrusion process)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

23428
S/121/61/000/006/001/012
D040/D112

1 1100

AUTHOR: Malkin, A.Ya.

TITLE: Progress in cutting-tool designs, production and inspection

PERIODICAL: Stanki i instrument, no.6, 1961, 1-4

TEXT: The Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut, or VNII, (All-Union Scientific Research Institute of Instruments) developed new cutting tools in the course of 1960. Multifaced hard-alloy tips screwed to normal shanks (Fig.1) have eliminated brazing. Such tips have to be turned only when an edge is blunted, and shanks need to be regrinded only after 20-25 tips have been worn out. Quickly-replaceable cutters for automatic machines and transfer lines were built on the same principle (Fig.2). The Kombinat tverdykh splavov (Hard Alloys Combine) supplies multiface cutter tips to order. A special tool holder (Fig.3) was developed for tool resetting off the machine (to eliminate stoppages for resetting). A special mill enabling locomotive wheels to be milled under the locomotive in situ is fitted with round cutting tips that revolve about their axes about 10 times during their service life and besides cut with both ends (so that each tip can work in 20 positions without regrinding). Drills are provided with ducts for the cutting fluid, with the outlet on the bottom end

Card 1/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Progress in cutting-tool designs .....

(Fig.6), and serve 2-5 times longer than usual. The "Frezer" and the Sestroretsk and Tomsk tool plants are producing these drills. All-hard-alloy drills and mills for narrow bores and slots (Fig.8) raise the work rate 5-20 times High-speed threading taps for automatic transfer lines are provided with a spiral groove for chips (Fig.9). The new VNII developments include a semi-automatic E324 (YE324) machine-tool for cutting round files (produced by the "Komsomolets" Plant after a suggestion by engineer V.I. Romanov [VNII]); a five-spindle automatic machine for continuous grinding of spiral drills, with a maximum capacity of 1000 drills per hour, and an automatic test unit revealing in 3 seconds the quantity of residual austenite in tools. The first unit is designed for drills 5-15 mm in diameter. It is said that determination of residual austenite in tools is a novelty. [Abstracter's note: General views of the two mentioned machine tools and the austenite test unit are shown in photographs. Design details are not described]. A conference of machine-tool makers held in Tomsk at the end of 1960 is briefly mentioned. Over 40 VNII reports were distributed to participants and discussed. There are 12 figures.

Card 2/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Progress in cutting-tool designs .....

23428
S/121/61/000/006/001/012
D040/D112

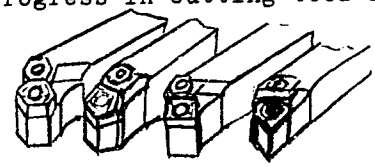
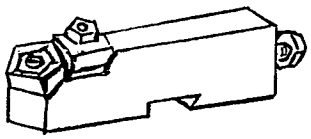


Fig.1



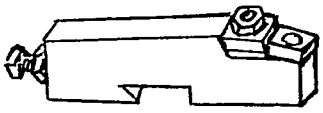


Fig.2

Fig.6

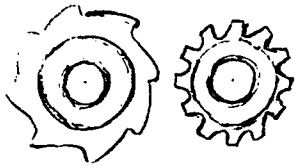


Fig.8 Mills

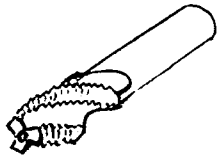


Fig.9

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

S/876/62/000/000/007/007
E191/E481

AUTHOR: Malkin, A.Ya.

TITLE: Tool design for automatic production lines

SOURCE: Proyektirovaniye i ekspluatatsiya avtomaticheskikh liniy mekhanicheskoy obrabotki. Mosk. dom nauchno-tekhn. prop. Ed. by A.P. Vladziyevskiy. Moscow, Mashgiz, 1962. 262-273

TEXT: Cutting tools, tool clamping devices and inspection jigs for tool-setting purposes are considered. A fast rate of metal removal, a long tool life, rapid tool changing, fast tool setting and re-setting and convenient chip removal must be ensured by good tool design. A reference face for longitudinal adjustment is required in cutting tools. High cutting speeds (2 to 3 times faster than normal) are usual in automatic production lines which require top quality cutting materials. Tools with internal cooling are used. Examples of rapid tool changing designs, automatic adjustment of tool position and automatic replacement of end mills from a magazine are shown. Mechanisms are illustrated for automatic tool changing with wear compensation. An

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Tool design for automatic ...

inspection fixture for tool setting in the machining of stepped shafts is shown. The best chip for automatic machine tools is a coil of 100 to 250 mm length. Chip breaking is achieved by superimposed feed motion pulses. A warning device which detects broken cutting edges is described, based on the sensing of pronounced rises in cutting force components. There are 9 figures and 1 table.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

SEMENCHENKO, D.I., kand. tekhn. nauk, red.; UKHACHEV, V.A.; MALKIN, A.Ya., doktor tekhn. nauk, prof., red.; SUZANOVICH, M.I., nauchn. red.

[Instruments for automating production in use abroad] Instrument dlia avtomatizirovannogo proizvodstva zarubezhnykh firm. Moskva, 1963. 85 p. (Novye mashiny, oborudovanie i sredstva avtomatizatsii. Seriia: U-77)

(MIRA 17:5)

1. Moscow. TSentral'nyy institut nauchno-tekhnicheskoy informatsii po avtomatizatsii i mashinostroyeniyu.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, A.Ya.

Some results of the activity of the All-Union Research Institute of Metal-Cutting Tools in 1962. Stan.i instr. 34 no.5:3-6 My '63. (MIRA 16:5)
(Metal-cutting tools--Technological innovations)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MAIKIN, A.Ya.

Development of designs and [illegible] of metal [illegible].
Stan. i instr. 35 no.7:[illegible] '64.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

L 10832-63 EPR/EPF(c)/EWP(j)/EWT(m)/BDS--ASD--Pr-4/Ps-4/Pc-4--RM/WW

ACCESSION NR: AP3000752 S/0020/63/150/003/0574/0577 73 72

AUTHOR: Vinogradov, G. V.; Malkin, A. Ya.; Prozorovskaya, N. V.; Kargin, V. A., Member of Academy of Sciences

TITLE: Rheology of polymers. Temperature-invariant characteristic of anomalous-viscous systems

SOURCE: AN SSSR. Doklady, v. 150, no. 3, 1963, 574-577

TOPIC TAGS: rheology of polymers, temperature-invariant, viscosity, high pressure polyethylene, alkatene 2 block polystyrene, isotactic polypropylene, Newtonian viscosity, rate of deformation

ABSTRACT: The viscosity of high pressure polyethylene, alkatene 2, block polystyrene and isotactic polypropylene was determined in a wide range of temperatures. This data, i.e., Newtonian viscosity Eta sub N and the rate of deformation D at different temperatures, was plotted using logarithmic coordinates. When the Newtonian viscosity was plotted against temperature T, an invariant curve was obtained for each polymer. This method can prove useful for determining viscosity values in a greater range of D rates than can be obtained experimentally: all that is required experimentally is data for one T curve and the Eta sub N at 3 or 4

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

L 10832-63
ACCESSION NR: AP3000752

temperatures so that the temperature-invariant curve can be drawn. Orig. art. has: 4 figures and 2 equations.

ASSOCIATION: Institut neftekhimcheskogo sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis, Academy of Sciences SSSR)

SUBMITTED: 07Jan63 DATE ACQD: 21Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 003 OTHER: 006

ch/ww
Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

L 13831-63 EEB/EWP(j)/EPF(c)/EWT(m)/BDS AFFTC/ASD Ps-4/Pc-4/Pr-4 RM/WW

ACCESSION NR: AP3003561 S/0020/63/151/002/0380/0383

AUTHORS: Malkin, A. Ya.; Leonov, A. I.

TITLE: Instability criteria for shear strains of elasto-viscous polymer systems

SOURCE: AN SSSR. Doklady, v. 151, no. 2, 1963, 380-383

TOPIC TAGS: shear strain, similarity theory, Reynolds number, homochronous number

ABSTRACT: The instability of flow and the manifestation of disturbances are analyzed by the method of similarity theory. A system of criteria (Reynolds number, homochronous number, Reynolds elastic number) is thus obtained which characterizes the deformation process of elasto-viscous media. When the Reynolds elastic number exceeds a certain critical value, the current ceases to be stable in relation to an arbitrary small disturbance in flow. The authors express their recognition to G. V. Vinogradov for directing this work and to Academician V. A. Kargin for its evaluation. The paper was presented by Academician V. A. Kargin on 4 February 1963. Orig. art. has: 20 formulas and 1 figure.

Association: Inst. of Petrochemical Synthesis, Academy of Sciences, SSSR

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

L 27201-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5002866 S/0207/64/000/005/0066/0074

20
B

AUTHORS: Vinogradov, G. V. (Moscow); Malkin, A. Ya. (Moscow)

TITLE: Rheological properties of polymers in the flow state

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1964, 66-74

TOPIC TAGS: polymer rheology, material strength, polymer creep/ REV 1 rotation viscosimeter, P 20 polybutylene, OP 30 polypropylene

ABSTRACT: The rheological properties of polymers were investigated in an effort to obtain mathematical models of observed physical phenomena. Tests were performed upon the commercial polymers polybutylene P-20, polypropylene OP-30, certain

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

upon the commercial polymers polybutylene DP-20, polypropylene DP-30, certain polyethylenes, polystyroles, and others. Testing equipment included rotation viscosimeter RET-1 and a capillary constant pressure viscosimeter. Deforming stress was measured with respect to relative deformation at various temperatures and various constant speeds of deformation. Figure 1 on the Enclosure is a plot of stress τ vs relative deformation γ (right side) and of stress vs time t during stress relaxation after flow has ceased. The authors developed a temperature invariant form of presenting polymer strength characteristics. A parameter η_0/η is defined which is related to strength by the empirical equation

Card 1/4 3

15

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

$$\eta_0/\eta = 1 + 6.12\cdot10^{-6}(\gamma\eta_0)^{0.868} + 2.35\cdot10^{-4}(\gamma\eta_0)^{0.71}$$

where η_0 is a variable defining the strength as a function of molecular weight and temperature. The experimental data which led to the establishment of the empirical formula are given in a logarithmic graph of η/η_0 vs τ/η_0. Dynamic strength characteristics were also fitted to the empirical equations

$$\eta_0/\eta_d = 1 + 6.12\cdot10^{-6}(\omega\eta_0)^{0.868} + 2.35\cdot10^{-4}(\omega\eta_0)^{0.71}$$

$$N(\omega) = \eta_0\left[\sum_{k=1}^{8} L_k(\omega\eta_0)^{0.868k}\right] : \left[\sum_{k=0}^{6} M_k(\omega\eta_0)^{0.868k}\right]$$

where η_d is the dynamic strength parameter, (ω) is the dynamic frequency, $N(\omega)$ is the Laplace function, and L_k and M_k are constants obtained from the equation for η_0/η_d. The temperature invariant stress vs time relationship is given in the form

$$\frac{\tau(t/\eta_0)}{\gamma_0} = \int_0^{\infty} \frac{N(s)}{s} e^{-(t/\eta_0)s}\,ds$$

$$s = \omega\eta_0$$

Card 2/4

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

L 27201-65

ACCESSION NR: AP5002866

and experimental data are plotted to demonstrate this relationship. Orig. art. has: 8 equations and 6 figures.

ASSOCIATION: none

SUBMITTED: 17Jun64 ENCL: 01 SUB CODE: MT

NO REF SOV: 009 OTHER: 003

Card 3/4

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MUSTAFAYEV, E. [deceased]; MALKIN, A.Ya.; PLOTNIKOVA, Ye.P.; VINOGRADOV, G.V.

Rheological properties of polyisobutylene. Vysokom.soed. 6 no.8:1515-1521 Ag '64. (MIRA 17:10)

1. Institut neftekhimicheskogo sinteza AN SSSR, laboratoriya reologii polimerov.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

VINOGRADOV, G.V.; ZABUGINA, M.P.; KONSTANTINOV, A.A.; KONYUKH, I.V.; MALKIN, A.Ya.; PROZOROVSKAYA, N.V.

Viscosity measurements of polymers in the condensed state by rotatory and capillary instruments. Vysokom.soed. 6 no.9:1646-1650 S '64. (MIRA 17:10)

1. Institut neftekhimicheskogo sinteza AN SSSR.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

LEONOV, A.I.; MALKIN, A.Ya.; VINOGRADOV, G.V.

Effect of the rigidity of dynamometers on the results of rheological measurements. Koll. zhur. 26 no.3:335-340 My-Je '64
(MIRA 17:9)

1. Institut neftekhimicheskogo sinteza AN SSSR imeni Topchiyeva.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

VINOGRADOV, G.V.; BELKIN, I.M.; KONSTANTINOV, A.A.; KRASHENINNIKOV, S.K.; ROGOV, B.A.; MALKIN, A.Ya.; KONYUKH, I.V.

Rotating elasto-viscosimeters for the testing of polymeric systems. Zav.lab. 30 no.3:364-367 '64. (MIRA 17:4)

1. Institut neftekhimicheskogo sinteza AN SSSR.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

L 27903-65
ACCESSION NR: AP4012974

Institute of Petrochemical Synthesis, Academy of Sciences SSSR)

SUBMITTED: 19Jul63 ENCL: 00

SUB CODE: OC, GC NO REF SOV: 002 OTHER: 010

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

ACCESSION NR: AP4019982 S/0020/64/154/006/1421/1424

AUTHOR: Vinogradov, G. V.; Malkin, A. Ya.; Plotnikova, Ye. P.; Kargin, V. A. (Academician)

TITLE: Thixotropy of polymers in viscous flow

SOURCE: AN SSSR. Doklady*, v. 154, no. 6, 1964, 1421-1424

TOPIC TAGS: polymer thixotropy, polyisobutylene, thixotropy, shear strength, polymer structure recovery, relaxation, structure recovery kinetics, polyisobutylene P-20

ABSTRACT: Investigations were conducted with polyisobutylene P-20 (molecular weight 20,000 - Staudinger; 100,000 - Flory) to determine the existence of thixotropy in polymers and to show that reversible changes in their structures occur on reaching the shear strength prior to steady-state flow. The present work confirmed that deformation of polyisobutylene can be accompanied by thixotropic breakdown of its supramolecular structures which occurs on reaching the shear strength. The rate of structure recovery is much lower than the rate of decrease of stresses during relaxation. Orig. art. has: 4 figures.

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

ACCESSION NR: AP4019982

ASSOCIATION: Laboratoriya reologii polimerov Instituta neftekhimicheskogo sinteza Akademii nauk SSSR (Polymer Rheology Laboratory, Institute of Petrochemical Synthesis, Academy of Sciences SSSR)

SUBMITTED: 11Oct63 DATE ACQ: 23Mar64 ENCL: 00

SUB CODE: OC NO REF SOV: 003 OTHER: 003

ATD PRESS: 3044

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

SOURCE: Khimicheskiye volokna, no. 2, 1965, 7-11

B

TOPIC TAGS: polypropylene, viscous flow, stress relaxation, Maxwell law/ OP 30 polypropylene, tiobis, PEV 1 elastoviscosimeter

ABSTRACT: The purpose of the investigation was to extend the presently available rheological data on polypropylene. The following properties were studied: growth of deformation with time, transition through the shearing limit, attainment and characteristics of conditions for steady flow, and characteristics of the condition of stress relaxation after attainment of steady flow at constant deformation. Experiments were performed on polypropylene of type OP-30 stabilized by 0.5% "tiobis". Measurements were carried out by means of a rotational elastoviscosimeter of type PEV-1. The viscosity of polypropylene is given in terms of the temperature invariant empirical relationship of G. V. Vinogradov, A. Ya. Malkin, N. V. Prozorovskaya, and V. A. Kargin, (DAN SSSR, 154, 890, 1964). The

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

where η_n is the maximum Newtonian viscosity, η the effective viscosity, and γ the relative deformation of the polymer. The temperature dependence of η_n is given by the Arrhenius relationship

$$\lg \eta_n = A - E/RT$$

with an energy of activation E = 23 Kcal/mole. The molecular weight determined from viscosity data was found to be 9×10^5. From stress relaxation data it is concluded that polypropylene does not obey Maxwell's law, nor can the relaxation be described in terms of any other linear model. Orig. art. has: 6 graphs and 2 equations.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva, AN SSSR (Institute for Petrochemical Synthesis, AN SSSR)

SUBMITTED: 08Jul64 ENCL: 00 SUB CODE: OC

NO REF SOV: 009 OTHER: 008

Card 2/2 L 8 L

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, A.Ya.; VINOGRADOV, G.V.

Dependence of the viscosity on the molecular weight, temperature, and parameters determining strain in polymers in the state of viscous flow. Vysokom.soed. 7 no.7:1134-1139 Jl '65.
(MIRA 18:8)

1. Institut neftekhimicheskogo sinteza AN SSSR.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, A.Ya.; YANOVSKIY, Yu.G.; VINOGRADOV, G.V.

Universality of the temperature-invariant characteristics of the dynamic properties of linear polymers in the state of flow. Vysokom. soed. 7 no.7:1140-1146 Jl '65. (MIRA 18:8)

1. Institut neftekhimicheskogo sinteza AN SSSR.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

L 27309-66 EWT(m)/EWP(j)/T/ETC(m)-6 LJP(c) WW/RM

ACC NR: AP6008976 SOURCE CODE: UR/0190/65/007/011/1930/1934

AUTHORS: Malkin, A. Ya.; Vinogradov, G. V.; Kargin, V. A.

ORG: Institute for Petrochemical Synthesis, AN SSSR (Institut neftekhimicheskogo sinteza AN SSSR)

TITLE: Rheology of polymers. The creep of polymers in the molten state

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 11, 1965, 1930-1934

TOPIC TAGS: polymer rheology, rheologic property, polyethylene, polyisobutylene

ABSTRACT: This investigation was conducted to extend the work of A. Ya. Malkin and G. V. Vinogradov (Kolloidn. zh., 27, 234, 1965). It was desired to determine the temperature invariant lag time distribution spectrum, to calculate theoretically the creep function, and to compare the latter with existing experimental literature data. The calculation is based on the equation presented by B. Gross (Mathematical Structure of the Theories of Viscolasticity, Hermann, Paris, 1953)

$$\gamma(t)=\int_{-\infty}^{t}\frac{d\tau(\theta)}{d\theta}\left[I_0+\frac{t-\theta}{\eta}+\psi(t-\theta)\right]d\theta,$$

where I_0 is the instantaneous yield, ψ - function of reversible creep, η - viscosity in the same region (where it is independent of the nature of the deformation), and τ - the stress. Calculated values of ψ are compared with experimental values obtained

Card 1/2 UDC: 678.01:53

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

L 27309-66

ACC NR: AP6008976

for polyisobutylenes of different molecular weights and for low density polyethylene. The comparison is presented graphically. It is concluded that the experimental data are in good agreement with the calculated results. The relation between elastic and irreversible deformation in the polymer was studied. It is concluded that the boundaries of the two different deformation regions are completely determined by the maximum Newtonian viscosity of the given polymer at the experimental temperature. Orig. art. has: 2 graphs and 7 equations.

SUB CODE: 11/ SUBM DATE: 16Dec64/ ORIG REF: 005/ OTH REF: 004

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, A.Ya.; VINOGRADOV, G.V.

Rheology of polymers. Relaxation properties of polymers in a state of visco-plastic flow. Koll. zhur. 27 no.2:234-241 Mr-Ap '65. (MIRA 18:6)

1. Institut neftekhimicheskogo sinteza AN SSSR, Moskva.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.A.; YERSHOV, V.A.

Modifying the design of a frame cross member of GAZ-51 and GAZ-63 automobiles. Avt.trakt.prom.no.5:31-32 My '53. (MLRA 6:5)

1. Gor'kovskiy avtozavod im. Molotova. (Automobiles--Design and construction)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

ACC NR: AP7002603 (A, N) SOURCE CODE: UR/0413/66/000/023/0110/0110

INVENTORS: Agayev, A. I.; Kol'chenko, A. V.; Malkin, B. D.; Kuznetsova, I. I.; Nikitin, G. M.; Gusman, M. T.

ORG: none

TITLE: A stepped rolling axle support. Class 47, No. 189254

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 110

TOPIC TAGS: antifriction bearing, ball bearing, bearing race

ABSTRACT: This Author Certificate presents a stepped rolling axle support containing thrust roller bearings, spacing collars, and an annular elastic element (see Fig. 1). To eliminate loose axle holes and to increase the efficiency under dynamic loads, the ball bearings of the support are placed in two rows, with the balls running between the outside flanges and the internal flange. The annular elastic element is mounted on each side of each ball bearing at a small distance from a spacing ring. A split bushing is placed between the inner flanges of the corresponding ball bearings.

Card 1/2

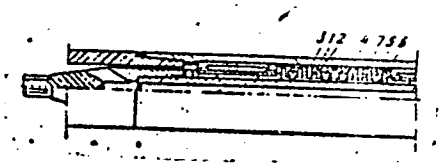
UDC: 621.822.3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

ACC NR: AP7002603

Fig. 1. 1 - balls; 2 - outside flange; 3 - inner flange; 4 - annular elastic element; 5 - space; 6 - spacing ring; 7 - split bushing



Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 05Mar66

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B. I.

7633-34. MALKIN, B. I. -- Obrabotka dableniyem, liteynoye delo I termicheskaya obrabotka. pod obshch. red. K. I. Costeva. M., oborongiz, 1954. 22 sm. (materialy po obmenu proizvod,. -- tekhn. opytom). bespl.
2. (sost. R. P. Kofman) 35. s. s ill. -- (55-3768)
3. (sost. B. I. Malkin). 36 s. s ill; 1 L. chert. -- (55-3939)
zagl. vyp. 1, 4: obrabotka davleniyem, liteynoye delo I svarka.

SO: Knizhnaya Letopsis', Vol. 7, 1955

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Machine-Shop Practice

Universal Device for the setting of a grinding wheel., Stan. i instr., No. 10, 1951.

MONTHLY LIST OF RUSSIAN ACCESSIONS. Library of Congress, March 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M., starshiy inzh.; ANDREYEV, V.M., prof., otv.red.; SUKHOV, I.V., starshiy inzh., red.; NADEZHINA, A.M., tekhn.red.

[Universal attachments for profile grinding of dies] Universal'noe prisposoblenie dlia profil'nogo shlifovaniia puansonov. Leningrad, 1952. 9 p. (Informatsionno-tekhnicheskii listok, no.45 (386)). (MIRA 14:6)

1. Leningradskiy Dom nauchno-tekhnicheskoy propagandy. 2. Leningradskiy Dom nauchno-tekhnicheskoy propagandy (for Sukhov).
(Grinding machines--Attachments)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

[illegible], A. A.

Machine-Shop Practice

Angle plate with magnetic fastening of work parts. Stan. i inst., 23, No. 2, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS. Library of Congress, June 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

1. MALKIN, B. M.

2. USSR (600)

4. Grinding and Polishing

7. Device for dressing grinding wheels, Stan. i instr. 24 No. 2 1953

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

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Magnetic plate for polishing parts at different angles. Stan.i instr. vol. 24 no.9:26-27 S '53. (MLRA 6:10)
(Grinding and polishing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Sine-bar attachments for grinding machines. Stan.i instr. 24 no.10:34-35 O '53. (MLRA 6:11)
(Machine tools)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Universal device for trueing grinding wheels without or with diamonds. (MLRA 6:12)
Stan.i instr. 24 no.11:28-29 N '53.
(Grinding wheels)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MAIKIN, B.M., inzhener.

Profile grinding of a complicated toothed punch die. Vest.mash. 33 no.3: 46-47 Mr '53. (MLRA 6:5)

1. Leningradskiy zavod "Elektrik" O.O. Khel'singa. (Grinding and polishing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 505 - I

BOOK Call No.: AF635127

Author: MALKIN, B. M.
Full Title: MECHANIZATION OF PROFILE GRINDING (ON SURFACE GRINDERS AND SHARPENERS)
Transliterated Title: Mekhanizatsiya pri shlifovanii fasonnykh detaley (na ploskoshlifoval'nykh i zatochnykh stankakh)

PUBLISHING DATA

Originating Agency: None
Publishing House: State Scientific and Technical Publishing House of Machine-Building and Shipbuilding Literature ("Mashgiz") Leningrad Branch
Date: 1954 No. pp.: 144 No. of copies: 6,000
Editorial Staff
Editor: Lomachenkov, S. Ye., Engineer
Appraiser: Kharchenko, K. S.

TEXT DATA

Coverage: This monograph deals with form-tool grinding. It contains examples and descriptions of various devices and processes. The methods of control are also discussed. Special attention is given to problems of the profile grinding of punches, dies, stencils, etc. The monograph is provided with many illustrations, diagrams, and tables. The explanations are simple and clear.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Mekhanizatsiya pri shlifovanii fasonnykh detaley (na ploskoshlifoval'nykh i zatochnykh stankakh) AID 505 - I

Table of Contents

Purpose: The book is intended for designers, workshop engineers and qualified grinders and polishers.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Mekhanizatsiya r.ri shlifovanii fasonnykh detaley (na ploskoshlifoval'nykh i zatochnykh stankakh) AID 505 - I

Facilities: None
No. of Russian and Slavic References: 9 (1947-1953)
Available: A.I.D., Library of Congress.

3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MAIKIN, B. M.

USSR/Miscellaneous - Industrial Processes

Card 1/1

Author : Malkin, B. M.

Title : Sinusoidal device for diamondless trimming of grinding wheels

Periodical : Stan. i Instr., No. 5, page 25, May 1954

Abstract : Report describes an universal sinusoidal device used for trimming of grinding disks along the periphery and at an angle with the aid of diamondless trimming tools. Drawing of the device is included and its mode of operation is explained. Proper preparation of this device and holder for diamondless trimming offers an accuracy of 30". Drawing.

Institution : ...

Submitted : ...

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Universal machine for coordinated grinding of shaped products. Stan.i instr. 25 no.4:34-36 Ap '54. (MLRA 7:6)
(Grinding and polishing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B. M.

USSR/Miscellaneous - Tools

Card 1/1 : Pub. 103 - 17/29

Authors : Malkin, B. M.

Title : Grinding spindle for jig-grinding and internal-grinding lathes

Periodical : Stan. i instr. 25, 33-34, Sep 1954

Abstract : A consistently lubricated grinding spindle operating at an rpm of about 30,000 and adopted for jig-grinding and internal-grinding machines is described. Table; drawings.

Institution : ...

Submitted : ...

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

USSR/Engineering - Machine tools

Card 1/1 Pub. 103 - 24/29

Authors : Malkin, B. M.

Title : A device for milling grooves and splines

Periodical : Stan i instr. 25 (10), page 36, Oct 1954

Abstract : The editorial gives some information concerning use of a device, designed by E. N. Shelokhvastov, for milling grooves and splines. Drawings.

Institution : ...

Submitted : ...

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

USSR/Engineering - Quenching equipment

Card 1/1 : Pub. 128 - 28/38

Authors : Malkin, B. M.

Title : Apparatus for repeated quenching of specimens

Periodical : Vest. mash. 34 (9), 85-87, Sep 1954

Abstract : A description is presented of the operation, structure and function of an apparatus for repeated quenching of specimens. The apparatus was designed by M. YA. Rabinovich for measuring the dimentional change in various metal specimens due to temperature. Illustration; drawings.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Malkin, B. M.

USSR/ Engineering

Card 1/1 Pub. 103 - 13/22

Authors : Malkin, B. M.

Title : Modernization of presses in order to prevent the injury of workers

Periodical : Stan. i instr. 26, 31-32, June 1955

Abstract : The conversion and modernization of a starting system of stamping presses is briefly discussed, and a description is given of the operation, function and construction of a press-actuating pneumatic valve. One USSR reference (1953). Drawings.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B. M.

USSR/ Engineering - Industrial processes

Card 1/1 Pub. 103 - 11/19

Authors : Malkin, B. M.

Title : Magnetic plate for layout and assembly work

Periodical : Stan. i instr. №2, 31 - 32, Feb 1955

Abstract : The employment of magnetic plates (blocks) with constant magnets for layout and assembly work is described. The magnets made of Co-12%, Ni-18%, Al-10%, Cu-6% and Fe are highly resistant to mechanical vibrations and temperature effects. The magnetic plate with constant magnets is considered no more expensive than any other universal device used for similar purposes regardless of its long service life (7 - 10 years). Drawing of a magnetic block is included.

Institution: .....

Submitted: .....

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Universal attachment for making profiled grinding wheels. Stan. i instr. 26 no.8:26-28 Ag'55. (MLRA 8:12)
(Grinding wheels)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Mechanizing cam-disk set-up operations on automatic lathes. (MLRA 9:2)
Stan.i instr. 26 no.12:28-29 D '55.
(Machine tools) (Lathes)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

USSR/ Engineering - Safety devices

Card 1/1 Pub. 128 - 12/28

Authors : Malkin, B. M., Eng.

Title : Devices ensuring work safety on stamping presses (from experiment of Leningrad factory "Electric Power" named after S. M. Kirov)

Periodical : Vest. mash. 35/6, 53 - 55, Jun 1955

Abstract : A pneumatic, left and right-handed starting device, and a pedal-type starting device incorporated on stamping presses to ensure work safety and prevent injury of workers during operations necessitating manual removal of blanks from between the punch and die, are described. One USSR reference (1953). Drawings.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Malkin, B M.

AID P - 5170

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 11/19

Author : Malkin, B. M.

Title : Fast-rotating pneumatic grinding spindles

Periodical : Stan. i instr., 27 6, 36-37, Je 1956

Abstract : Three different pneumatic-rotor type grinding spindles are briefly described. One of these is the author's design, another is similar to the first, and the third is of the two-turbine type. The rotor-type spindles outlast those operated by belt 1 to 10. Three drawings.

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

AID P - 4284

Subject : USSR/Engineering

Card 1/1 Pub. 128 - 9/25

Author : Malkin, B. M., Engineer

Title : Highly-efficient grinding on the micro-optical precision grinding lathe.

Periodical : Vest. mash., 36 #2, p. 34-37, F 1956

Abstract : The shaping of curved surface profiles with any prescribed radius of curvature can be efficiently achieved on micro-optical machines. This precision grinding as applied to shaping of dies is described. Diagrams, photo.

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

25(1) PHASE I BOOK EXPLOITATION SOV/1351

Malkin, Boris Moiseyevich

Stanki i prisposobleniya dlya koordinatnogo shlifovaniya (Jig-grinding Machines and Attachments) Moscow, Mashgiz, 1957. 241 p. 10,000 copies printed.

Reviewer: Vakser, D.B., Docent; Ed.: Lomachenkov, S.Ye., Engineer; Ed. of Publishing House: Leykina, T.L.; Tech. Ed.: Sokolova, L.V.; Chief Ed. (Leningrad Division, Mashgiz): Bol'shakov, S.A., Engineer.

PURPOSE: This book is intended for engineers, technologists and designers. It may also be useful to specialized grinders and machinists.

COVERAGE: Jig-grinders and universal attachments for optical-jig, surface, and tool and cutter grinding machines used for grinding hardened parts are described. Methods and techniques of internal and external grinding of intricate-contour tools, dies, and other parts are presented. Various problems of design and repair of high-speed belt-driven and pneumatic grinding spindles are discussed in detail, and various diamond and non-diamond wheel-dressing devices are described. No personalities are mentioned. There are 12 references, 10 of which are Soviet and 2 English.

Card 1/4

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

AVAILABLE: Library of Congress (TJ 1280 .M29) GO/sfm
4-3-59
Card 4/4

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

MALKIN, B.M., inzhener.

Stay bushings with hard alloy inserts for automatic long-bed lathes. (MLRA 10:9)
Vest.mash. 37 no.9:43-45 S '57.
(Lathes)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

AUTHOR: Malkin, B.M. Engineer 117-58-5-8/24

TITLE: Device for Controlling the Wobble of Lathe Collars (Prispo-sobleniye dlya kontrolya biyeniya tsang)

PERIODICAL: Mashinostroitel', 1958, Nr 5, pp 22-23 (USSR)

ABSTRACT: Lathe collars in automatic turret lathes exist in a variety of types and dimensions; they can be divided in 3 groups: straight cone collars, reverse cone collars and double cone collars as shown in figure 1. The checking of these collars for size and accuracy is a difficult job involving great responsibility. Figure 2 shows a device constructed by M.Ya. Rabinovich, which permits checking the vacillation of lathe collars up to 2nd class accuracy. This portable device consists of a neck with a set of interchangeable rings and control pins, a special gauge and a support plate. After inserting the collar to be checked into the gauge and securing it with two suitable rings, the control pin is inserted and fastened. It is now possible to ascertain the wobble of the collar by means of an indicator mounted on a stand as is shown in figure 2. Vacillation should not exceed 0.005 mm. Depending upon the type of collar to be checked different

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Device for Controlling Wobble of Lathe Collars 117-58-5-8/24

sets of rings are used. There are 3 figures and 1 table.

AVAILABLE: Library of Congress

Card 2/2 1. Turret lathes-Operation 2. Collars-Applications

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

SOV/122-58-6-30/37

AUTHOR: Malkin, B.M., Engineer

TITLE: The Grinding of Profiled Components on a Magnetic Chuck by rorm Wheels Profiled from a Master (Shlifovaniye na magnitnoy plite fasonnykh detaley krugami, profilirovannymi po kopiru)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 6, pp 74-76 (USSR)

ABSTRACT: A practice developed in Czechoslovakian tool shops is described with drawings of tools and fixtures in which split die plates and templates of press tools are ground on the magnetic chuck of a surface grinder by a broad profiled grinding wheel. The profiled openings of die plates without a split are ground on a jig grinding machine. In the former process, the component profile, which is conjugate to the die plate profile is similar to that of the grinding wheel profile. The component is therefore used as a master, guiding the feeler of the wheel dressing attachment. The procedure is discussed in comparison with other methods. The advantages lie mainly

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

SOV/122-58-6-30/37

The Grinding of Profiled Components on a Magnetic Chuck by Form Wheels Profiled From a Master

in the elimination of the need for auxiliary templates or complex profile calculations. A similar procedure is recommended in the forming of profiled cutting tools. There are 5 figures.

Card 2/2 1. Cutting tools--Design 2. Grinders--Equipment
3. Machine shop practice 4. Templates--Machining

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

SOV/121-58-10-17/25

AUTHOR: Malkin, B.M.

TITLE: A Pneumatic Machine Vice (Pnevmaticheskiye mashinnyye tiski)

PERIODICAL: Stanki i Instrument, 1958, Nr 10, p 38 (USSR)

ABSTRACT: A large pneumatically actuated machine vice is illustrated by an external photograph, cross-sectional drawings and its compressed air circuit designed for connection to the shop distribution system. The pneumatic circuit includes a control valve for fast approach and pre-loading, strong clamping and release. The compressed air acts on a disc sealed by a diaphragm. The disc operates in a shallow cavity inside the base of the vice and actuates the moving cheek through a bellcrank. The cheek bracket is adjusted to the approximate length of the component by sliding along slideways which

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

SOV/121-58-10-17/25

A Pneumatic Machine Vice

form part of the assembly displaced by the air mechanism. There are 3 illustrations including 1 photo.

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

SOV/122-58-12-28/32

AUTHOR: Malkin, B.N., Engineer

TITLE: Fixtures for Surface Grinders (Czecho-Slovak Works Practice) (Prisposobleniya k ploskoshlifoval'nym stankam (Iz opyta zavodov Chekhoslovakii))

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 12, pp 72-76 (USSR)

ABSTRACT: A number of fixtures mounted on sine bars are illustrated and described. Fig 1 shows an adjustable set of blocks containing fixed centring cones. The blocks slide on the top face of the sine bar and are clamped against a T-profile. Fig 2 is a V-block with external T-profile on top of a sine bar. Fig 3 is a machine vice swivelling at one end with a sine bar corner at the other. A sine bar with 45 and 30° slopes on the top is illustrated in Fig 4. Fig 5 is a sine bar with clamping fittings. Fig 6 is a universal sine fixture which permits the setting up of a component at compound angles. The accuracy of setting up with sine bars is stated to be 30 secs of angle.

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

SOV/122-58-12-28/32

Fixtures for Surface Grinders (Czecho-Slovak Works Practice)

In Fig 7 a universal fixture is shown for clamping die plates between interchangeable jaws. Fig 9 shows the manner in which this type of fixture is used to grind a complex profile.

There are 9 figures.

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M., inzh.

Grinding shaped workpieces on a magnetic plate by copy-profiled grinding wheels. Vest. mash. 38 no. 6:74-76 Je '58. (MIRA 11:7)
(Grinding and polishing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M., inzh.

Attachments to surface-grinding machines; experience of plants in Czechoslovakia. Vest.mash. 38 no.12:72-76 D '58. (MIRA 11:12)

(Czechoslovakia--Grinding machines)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Technological processes of making parts of cutting dies used for forging rotor and stator plates. Kuz.-shtam.proizv. 1 no.5:45-46 My '59. (MIRA 12:10)
(Dies (Metalworking))

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

25(2) SOV/117-59-4-12/36

AUTHOR: Malkin, B.M., Engineer

TITLE: A Small Magnetic Block for Toolmaking

PERIODICAL: Mashinostroitel', 1959, Nr 4, pp 27-28 (USSR)

ABSTRACT: The article contains detailed information on the design, operation and making of a small laminated magnetic block used for holding work on face grinders. The subject block is composed of permanent magnets, ARMCO-iron plates and non-magnetic linings. The magnets are of "magnico" alloy molten in an induction furnace by first charging iron, cobalt and nickel (forcing metal pieces into the metal bath), then adding copper by forcing it with a quartz stick, and finally adding aluminum that also has to be forced down to avoid its burning. The smelt is stirred with a quartz stick before teeming directly into the mold. The alloy temperature must be 1600-1630°C; a higher teeming

Card 1/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

A Small Magnetic Block for Toolmaking.

temperature makes the magnets brittle. The teeming must be swift and in an uninterrupted jet, to prevent oxidization. It is good to melt several heats of low-carbon steel in the furnace, after every relining, before starting to melt the magnetic alloy, to prevent it from trapping gas separated from not perfectly baked lining. The best furnace capacity is 5-10 kg. A charge of 3-6 kg melts 5-8 min. The mold is made of 90% quartz sand and 10% fireclay. Cast magnets will be rough-ground with corundum wheels on ceramic binder ("SM2") of grain size 36-46, and finish-ground with the same wheels of grain size 60. To obtain a good soldering joint for the ARMCO-iron plates in the upper plate of the block, the grooves in the plate and the ARMCO plates must be electrolytically coated with tin. The inserted plates will then be soldered in place with molten solder

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

A Small Magnetic Block for Toolmaking.

(e.g. "POS-30"). When the magnet plates are being magnetized, all North poles of the separate plates must be facing one side (e.g. the upper plate) and all the South poles must be facing the other side. It is known from experience that magnetic blocks with alternating magnetic poles on one side are considerably weaker in holding the work. The attachment of work on the described magnetic block takes 2-3 sec. The work is attached and detached by a turn of a handle requiring a force of 0.8 kg. The block permits the simultaneous grinding of several parts with an accuracy of angles up to 1'. There is 1 set of diagrams.

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

28(4)

AUTHORS: Malkin, B. M., Rabinovich, M. Ya. SOV/32-25-9-41/53

TITLE: Unit for the Repeated Hardening of Samples

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 9, pp 1133-1134 (USSR)

ABSTRACT: In order to investigate the operating characteristics (dimension changes, changes of the surface purity, etc.) of details which are designed for a casting under pressure, as well as of molds which work under high temperatures, a unit for the repeated hardening of the samples was developed (Fig 1). On the basis of a graph, a description of the system is given. The unit also has a mechanism for transferring the sample from one medium into the other, i.e., for the heating or cooling, making possible an automatic control of the heating period and of the number of repetitions of the heating or cooling process. There are 2 figures.

Card 1/1

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

PHASE I BOOK EXPLOITATION SOV/5307

Malkin, Boris Moiseyevich

Profil'noye shlifovaniye (Profile Grinding) Moscow, Mashgiz, 1960. 118 p. (Series: Bibliotechka shlifovshchika, vyp. 6) 12,000 copies printed.

Ed. (Title page): G. F. Kudasov, Candidate of Technical Sciences; Reviewer: D. B. Vakser, Docent; Ed.: V. D. Glyass, Engineer; Ed. of Publishing House: A. I. Varkovetskaya; Tech. Ed.: A. I. Kontorovich; Managing Ed. for Literature on Machine-Building Technology, Leningrad Department, Mashgiz: Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for foremen, grinders, and students in technical and trade schools. It may also be useful to process engineers working in machine and machine-tool construction.

COVERAGE: New, highly productive methods of grinding irregularly shaped parts such as gears, spline shafts, templets, punches, etc..on surface-grinding machines and on machines with optical

Card 1/5

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

viewing are discussed. The designs of fixtures for the fastening and location of parts for grinding are shown. Considerable attention is given to the experience of leading plants in profile grinding. No personalities are mentioned. There are 4 references, all Soviet.

TABLE OF CONTENTS:

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

S/117/60/000/001/003/005

AUTHOR: Malkin, B. M., Engineer

TITLE: Small High-Speed Electric Grinding Spindle

PERIODICAL: Mashinostroitel', No. 1, pp. 20-22, 1960

TEXT: The author describes a 36,000-rpm electric grinding spindle having a housing diameter of 40 mm. This spindle can be installed on coordinate-grinding machines, internal grinding machines and lathes for precision machining of small apertures. The internal grinding machines used at industrial installations do not possess an adequate efficiency in grinding small-diameter holes because of too low spindle speeds. The new device consists of the spindle itself and a small-size electric motor. The spindle is connected directly to the motor shaft by a two-sectional coupling. The spindle rotates in four pre-loaded precision ball bearings. The rotor of the motor has a short-circuited aluminum winding and is mounted in two magneto-type ball bearings. The rotor shaft carries a centrifugal fan for forced air cooling. The power for operating the motor (9.45 amps, 40volts, three-phase a-c of 600 cps) is supplied by a "24ГИС1"(24GIS1) generator driven by an "A041.2" asynchronous electric motor (3000 rpm). The author gives a detailed description of the spindle design. He points out that the fitting diameters of the spindle(shaft) and housing must have a Class I accuracy. There are 2 diagrams.

Card 1/1

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

S/122/60/000/002/012/018
A161/A130

AUTHOR: Malkin, B. M., Engineer

TITLE: Precise fast profiling of grinding wheels on plane grinding machines

PERIODICAL: Vestnik mashinostroyeniya, no. 2, 1960, 60 - 64

TEXT: The equipment and methods used for profiling complex special grinding wheels at many Soviet plants are inadequate and obsolete, and such grinding wheels are needed to mechanize the making of dies, press molds and templets. The author points out that profile grinding on plane grinders is highly productive, and it has been used widely in the USSR and abroad for 10 - 15 years. The article contains a detailed description of a universal wheel grinding attachment to plane grinders and detailed information on wheel truing methods used for a long time at some Soviet machine and instrument plants. This attachment enables wheel truing to be carried out to an accuracy of 0,015 - 0,02 mm on arcs, and to 5' angles, provided the attachment itself is built accurately. It is designed for installing on the magnetic plate of a plane grinder. The body can be turned on a base, and the carriage can be moved on guides on the body. A slide with a post is moved by turning a handwheel (a pinion on its axis engages a rack on the slide); a diamond

Card 1/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

Precise fast profiling of grinding wheels on... 3/122/60/000/002/012/018
A161/A130

holder is fixed with screws. The diamond is moved to the grinding wheel by a knob (it is set on a lead screw). A scale is provided for angle setting. The article includes some wheel profiles with a diagram explaining the calculation of Johanson blocks used with the device. Detailed instructions are given how to set the device for profiling each of the illustrated wheel kinds. The size of the Johanson block pile (CO) is to be determined from a OCO_1 triangle:

$$CO = \sqrt{(R + R_1)^2 - L_1^2} .$$

The setting includes two block piles of different length. It is mentioned that the universal device raises the work efficiency 2 - 3 times and permits the profiling of grinding wheels with complex outlines. There are 5 figures.

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

WALKIN, B.M., inzh.

Precision straightening of grinding-wheel profiles formed by the arc of a circle. Mashinostroitel' no.3:40-42 Mr '60. (MIRA 13:6)

(Grinding wheels)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Gauging holes with measuring balls. Mashinostroitel' no.8:32 Ag '60. (MIRA 13:9)

(Machine-shop practice)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

S/122/60/000/010/013/015
A161/A030

AUTHOR: Malkin, B.M., Engineer

TITLE: Pneumatic High-Speed Spindle for Grinding and Lapping

PERIODICAL: Vestnik mashinostroyeniya, 1960, No.10, pp.71-72

TEXT: The described spindle (Fig. p.71) was designed by the author and may be used for internal grinders, jig-grinders, lathes and lapping machines. It develops 40,000 rpm at an air pressure of 4.5 - 5 atm in the air network. The spindle shaft is mounted on two radial thrust ball bearings and connected by a coupling to the shaft of a rotary motor ("2" on Fig.) on ball bearings. The rotor is shown in cross section view; its four blades are made of "textolite". Waste air escapes into the ambient atmosphere; to keep noise down a felt packing is laid loosely into the annular space. The inner races of the bearings are fixed on the shaft, and the outer ones are loaded by a spring (10) to prevent gapping when balls wear down. The arbor with the grinding wheel attached to it with bakelite varnish, or the lapping tool, are clamped in the grip (11) with a nut. Filtered mineral oil of low viscosity (e.g. spindle oil "No.2", or turbine oil "L") is recommen-

Card 1/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

S/122/60/000/010/013/013
A161/A030

Pneumatic High-Speed Spindle for Grinding and Lapping

ded for lubrication of the bearings. The author stresses that according to information from the ball bearing works the life of grinding spindles without transmission belt is 10 times higher than with belt, and points out that pneumatic spindles have come into extensive use in other countries. One example are the spindles in the Swiss "Hauser" grinding machines. There is 1 figure.

Card 2/3

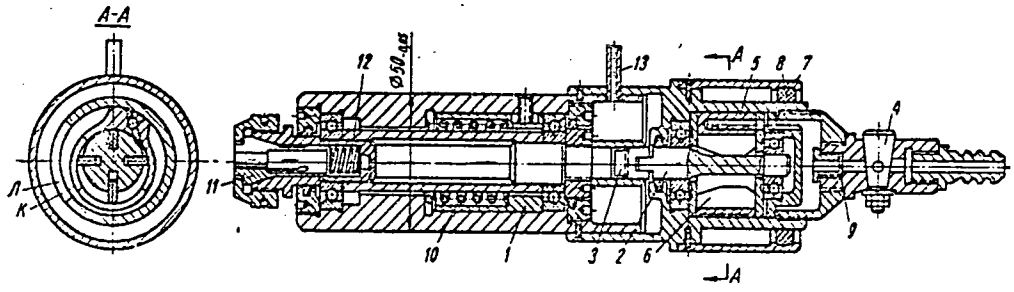
APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

3/122/60/000/010/013/015
A161/A030

Pneumatic High-Speed Spindle for Grinding and Lapping

Fig. (p.71) : Pneumatic high-speed spindle



Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Finishing surfaces by burnishing with rollers. Mashinostroitel' no.11:46-47 N '60. (MIRA 13:10)
(Metalwork)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M., inzh.

High-speed pneumatic spindle for grinding and lapping. (MIRA 13:10)
Vest.mash. 40 no.10:71-72 O'60.
(Grinding machines--Attachments)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, Boris Moiseyevich; SOBOLEV, N.P., prof., retsenzent; LOMACHENKOV, S.Ye., inzh., red.; LEYKINA, T.L., red. izd-va; SHCHETININA, L.V., tekhn. red.

[Attachments for grinding machines] Prisposobleniia k shlifoval'nym stankam. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 191 p. (MIRA 14:10)
(Grinding machines—Attachments)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

New chucks and mandrels for machine tools. Mashinostroitel' no.3:46-47 Mr '61. (MIRA 14:3)
(Chucks)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Devices for screwing and unscrewing dowels. Stan.i instr. 33 no.8:38 Ag '62. (MIRA 15:8)

(Screwdrivers)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Device for exchanging grinding wheels on profile-grinding machines. Stan.i instr. 33 no.12:34 D '62. (MIRA 16:1)
(Grinding machines—Attachments)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M., inzh.

Efficient grinding of the profile of prismatic form cutters.
Vest.mash. 42 no.1:70-74 Ja '62. (MIRA 15:1)
(Grinding and polishing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

L 13529-63 EWP(k)/EWT(d)/EWT(m)/BDS Pf-4

ACCESSION NR: AP3002759 S/0121/63/000/006/0020/0021

AUTHOR: Malkin, B. M.

TITLE: Profile-grinidng machine with a microscope

SOURCE: Stanki i instrument, no. 6, 1963, 20-21

TOPIC TAGS: profile-grinding machine, microscope, complex profiles

ABSTRACT: The profile-grinding machine 2SPSh was designed for grinding of products with complex profiles, having any combination of arcs and straight lines (dies, sectional dies, gauges, prismatic tools, etc.). There is no copying device, pantograph or enlarger on this machine. A 20-power microscope is built into the machine. The author describes all details and functions of the grinder. The maximum radius of the ground profile is 80 mm for convex and 60 mm for concave profiles. The travel range of ways the upper table is 125 mm. The travel range of ways on the lower table is 330 mm in direction of the X-axis. The cross-feed range is 130 mm. Orig. art. has: 2 figures.

ASSOCIATION: none

Card 1/1

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Attachment for straightening grinding wheels with magnetic fastening. Stan.i instr. 34 no.3:42-43 Mr '63. (MIRA 16:5)
(Grinding machines—Attachments)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Magnetic equipment for grinding machines. Tekhnika Bulg 13 no.6: 28-30 '64.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Magnetic attachments for grinding machines. Stan i instr. 35 no. 4:31-33 Ap '64. (MIRA 17:5)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.

Attachments for straightening grinding wheels and for grinding profiled surfaces. Stan.i instr. 35 no.9:19-20 S '64. (MIRA 17:10)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6

MALKIN, B.M.; TURETSKIY, I.Yu., kand. tekhn. nauk, retsenzent

[Magnetic attachments for machine tools] Magnitnye prisposobleniia k metallorezhushchim stankam. Moskva, Mashinostroenie, 1965. 202 p. (MIRA 18:3)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031820019-6"