MESHCHANSKIY, L.B.

MESHCHANSKIY, L.B., red.; KUZ'MIN, G.M., tekhn. red.

[Ephemerides of TSinger pairs for 1956, 1957, and 1958] Efemeridy par TSingera na 1956, 1957 i 1958 gg. Moskva, Izd-vo geodez. lit-ry, 1954. 273 p. (Leningrad. TSentral'nyi nauchno-issledovatel'skii institut geodezii, aeros"emki i kartografii. Trudy, no.106).
(Ephemerides) (MIRA 10:12)

PCHELKO, Yevgeniya Grigor'yevna; MESHCHANSKIY, L.B., redaktor; KHROMCHENKO, F.I., redaktor izdatel'stva; KUZ'MIN, G.M., tekhnicheskiy redaktor

[A bibliography of the works of the Central Research Institute of Geodesy, Aerial Surveying and Cartography from 1929 to 1955] Bibliograficheskii ukazatel' trudov TSentral'nogo nauchno-issledovatel'skogo instituta geodezii, aeros"emki i kartografii za 1929-1955 gg. Moskva, Izd-vo geodezicheskoi lit-ry, 1956. 58 p. (MLRA 9:11)

1. Leningrad, TSentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"yemki i kartografii.
(Bibliography--Cartography)
(Bibliography--Geodesy)
(Bibliography--Photography, Aerial)

MESHCHANSKIY, L. B.

PHASE I BOOK EXPLOITATION SOV/4829

Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"yemki, i kartografii

Rabochiye efemeridy par Tsingera dlya shirot 50-60°, epokha 1965,0, tom 3 (Working Ephemerides of Tsinger Pairs for Latitudes 50-60° for the Epoch 1965,0, Vol. 3) Moscow, Geodezizdat, 1960. 139 p. (Series: Its: Trudy, vyp. 134) 1,000 copies printed.

Sponsoring Agencies: Glavnoye upravleniye geodezii i kartografii Ministerstva geologii i okhrany nedr SSSR; Tsentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"yemki i kartografii.

Ed.: L.B. Meshchanskiy; Tech. Ed.: V.V. Romanova; Ed. of Publishing House: V.I. Vasil'yeva.

PURPOSE: This book is intended for astronomers.

COVERAGE: This is the third of a 3-volume work containing the working ephemerides of Tsinger pairs used to determine time for latitudes from +30 to +60°. Volume 1 contains ephemerides for latitudes from +30 to +40° with pair numeration from

Card 1/2

Working Ephemerides of Tsinger Pairs (Cont.) SOV/4829

1 to 500; Volume 2 contains ephemerides from +40 to +50° with pair numeration from 501 to 1000; this volume, the third, contains ephemerides for +50 to +60° with pair numeration from 1001 to 1500. The pairs are compiled from stars of a magnitude of not less than 5.3. Computation and check of working ephemerides was performed by the Moscow Aerogeodetic Establishment of GUGK (Main Administration of Geodesy and Cartography). Selection of pairs was made by N. Belyayev, senior scientific worker of TsNIIGAiK (Central Scientific Research Institute of Geodesy, Aerial Surveying, and Cartography). There are no references.

TABLE OF CONTENTS:

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Mean Locations of Stars Composing the Pairs of Working Ephemerides Contained in Volume 3. Epoch 1965.0 3

Working Ephemerides of Tsinger Pairs for Latitudes 50-60°. Epoch 1965.0 13

AVAILABLE: Library of Congress

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2/24/61

PCHELKO, Ye.G.; MESHCHANSKIY, L.B., red.

[Bibliographical index to the Transactions of the Central Scientific Research Institute of Geodesy, Aerial Photography, and Cartography, for the years 1956-1960]Bibliograficheskii ukazatel' Trudov TSentral'nogo nauchno-issledovatel'skogo instituta geodezii, aeros'emki i kartografii za 1956-1960 gg. Sost. E.G.Pchelko. Moskva, 1961. 29 p. (MIRA 15:11)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut geodezii, aeros"yemki i kartografii.
(Bibliography--Geodesy) (Bibliography--Cartography)

MESHCHANSKIY, L.B., red.; VASIL'YEVA, V.I., red.izd-va; ROMANOVA, V.V., tekhn.red.

[Working ephemerides of TSinger pairs for 40^0—50^0 latitude of 1965. 0 epoch. Vol.2] Rabochie efemeridy par TSingera dlia shirot 40 - 50^0epokha 1965.0. Moskva, Geodezizdat. Vol. 2. 1962. 140 p. (Moskow. TSentral'nyi nauchno-issledovatel'skii institut geodezii, aeros"emki i kartografii. Trudy, no.136). (MIRA 16:5)
(Stars—Ephemerides)

USSR

MESHCHENKO, V.; TURKEL'TAUB, M.S., prof., red.; KRIVIN, F., red.; LUCHKIV, M., tekhn. red.

[Mineral springs of Transcarpathia]Mineral'nye istochniki Zakarpat'ia. Pod red. M.S.Turkel'tauba. Uzhgorod, Zakarpatskoe obl.izd-vo, 1956. 59 p. (MIRA 16:2)
(TRANSCARPATHIA--MINERAL WATERS)

ZAIDERIY, I.I., kandidat sel'skokhozyaystvennykh nauk; MESHCHENKO, V.M. nauchnyy sotrudnik.

Etiology of hematuria of cattle in the Transcarpathian region. Veterinarria 30 no.9:39-43 S '53. (MLRA 6:8)

1. Zakarpatskaya selskokhozyaystvennaya opytnaya stantsiya (for Meshchenko); 2. Zakarpatskiy sanitarno-bakteriologicheskiy institut (for Meshchenko).

MESHCHENKO, V. M.

The importance of certain microelements for the fertility of domestic animals and birds. I. I. Zaderii, V. M. Meshchenko, and E. A. Mezhevinskaya. *Zhur. Obshchei Biol.* 15, 70-88(1954).—Three altitude zones, lowland, foreland, and highland, in a Carpathian region were studied with respect to the zonal effect on the fertility of mares and chickens. The result indicated a higher fertility in lowland than in highland. The chem. compn. of the fodder (oats, corn (seeds), oat straw, and hay) showed higher amts. of total protein, digestible protein, Ca, P, and vitamins A and D in the highland fodder, proving that these chem. constituents apparently do not affect the fertility. The difference in fertility was shown to be related to the iodine deficiency in the fodder and drinking water of the highland. In the fodder examd. (oats, barley (seeds), hay, green rye, alfalfa, and clover) the amt. of I varied from 27 (alfalfa, highland) to 205 γ/kg. (hay, foreland); the largest zonal difference was found in barley seeds: highland 74, lowland 109 γ/kg., resp. The spring waters of the region contained 0.0-6.1 (highland), 7.3 (foreland), and 19.0-51.9 γ I/l. (lowland); the F content was 58.9-130.0, 0, and 0-30.0 γ/l., resp. Fertilized chicken eggs contained more I (10.8-15.8) than sterile ones (2.1-6.3 γ/100 g.). Supplementary feeding with 1 mg. KI/bird/day increased the overall egg hatching by 33% by decreasing the amt. of sterile eggs and the amt. of eggs with weak embryos; the output of eggs per bird was not increased. The feeding of 0.38 mg. $CoSO_4$/bird/day increased not only the egg fertility (19%) but also the egg production (21-27%). However, the effect was less pronounced in highland since the fodder contained sufficient Co. B. Wierbicki

Meshchenko V.M.

MESHCHENKO, V.M. (Uzhgorod)

Some questions concerning iodine prophylaxis of endemic goiter; concerning a communication by M.E. Skatkov entitled: Iodine prevention of endemic goiter. Probl.endok. i gorm. 3 no.2:108-110 Mr-Ap '57. (MIRA 10:10)

(GOITER, prev. & control
iodine in endemic areas (Rus))
(IODINE, ther. use
prev. of endemic goiter (Rus))

T

USSR/Human and Animal Physiology (Normal and Pathological).
Internal Secretion. Thyroid Gland.

Abs Jour: Ref Zhur-Biol., No 17, 1958, 79749.

Author : Meshchenko, V.M.
Inst :
Title : Connection of Endemic Goiter in the Zakarpatskaya Oblast with the Iodine Content in the Objects of the External Environment.

Orig Pub: Vrachebn. delo, 1957, No 7, 739-744.

Abstract: Analysis of the drinking water, soil and food products showed that, in regions of endemic goiter (EG), the content of I decreases, especially in the food products which contain ~ 85-90% of the necessary I; water contains not > 5-8% I. With the use by the population of mineral water which contains I, the percent of I

Card : 1/2

Ukr. Gor. Inst. Epidemiology, Microbiology and Hygiene

51

MESHCHENKO, V.M.

ZADERIY, I.I., dotsent; MESHCHENKO, V.M.

Prevention and treatment of hematuria in cattle. Veterinariia 34 no.5: 46-48 My '57. (MLRA 10:6)

1. Belotserkovskiy sel'skokhozyaystvennyy institut (for Zaderiy).
2. Direktor Zakarpatskogo nauchno-issledovatel skogo sanitarno-bakteriologicheskogo instituta (for Meshchenko).
(Hematuria) (Cattle--Diseases and pests)

MESHCHERSKO, V. K.

"A description of various biotopes in the Transcarpathian oblast from the viewpoint of natural foci of human diseases." p. 27

Desyatoye Soveshchaniye po parazitologicheskim problemam i prirodnoochagovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1 254pp.

MESHCHERYAKOV, V. M., SEGAL', I. S., MOCKAITIS, N. D., KUTINICH, I. M.

"Epidemiological characteristics of the focus of tick-borne encephalitis in the Transcarpathian oblast." Page 84

Desyatoye soveshchaniye po parazitologicheskim problemam i prirodnoochagovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1 254pp.

AVAKYAN, A.A.; SHEMSHILEVICH, S.B.; MESHCHENKO, V.M.

Hemorrhagic nephroso nephritis in Trans Carpathia hemorrhagic fever with renal syndrome. Vop. virus. 4 no.1:90-94 Ja-F '59. (MIRA 12:4)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva.
(EPIDEMIC HEMORRHAGIC FEVER, epidemiol.
in Trans-Carpathian zone (Rus))

KULINICH, I.M.; MESHCHERNKO, V.M.; TOVBIN, A.L.

Experience with serological examination of patients with fever of unknown etiology aimed at the detection of typhus in the Transcarpathian Province. Vop.virus. 4 no.3:280-283 My-Je '59. (MIRA 12:8)

1. Uzhgorodskiy nauchno-issledovatel'skiy institut epidemiologii, mikrobiologii i gigiyeny i Zakarpatskaya oblastnaya sanitarno-epidemiologicheskaya stantsiya.
(TYPHUS, epidemiol.
in Russia, serol. reactions during mass exam. (Rus))

MESHCHENKO, V.M.; ALEKSIK, V.I.; MEZHVINSKAYA, E.A.

Iodine, bromine, fluorine & cobalt in drinking waters of Transcarpathian Province [with summary in English]. Gig. i san. 24 no.2:7-11 F '59. (MIRA 12:3)

1. Iz Uzhgorodskogo instituta epidemiologii, mikrobiologii i gigiyeny.

(WATER SUPPLY
bromine, cobalt, fluorine & iodine in drinking waters of Transcarpathian region (Rus))

ESHCHENKO, V.M.; ALEKSIK, V.I.; MEZHVINSKAYA, E.A.

Concentration of some trace elements (cobalt, iodine, fluorine, bromine) in soils, drinking water, and foodstuffs in different biogeochemical provinces of Transcarpathia. Trudy Biogeokhim. lab. no.11:120-123 '60. (MIRA 14:5)

1. Uzhgorodskiy institut epidemiologii, mikrobiologii i gigiyeny.
(TRANSCARPATHIA—TRACE ELEMENTS)

MESHCHENKO, V.M.; KOTELYANSKAYA, L.I.; ALEKSIK, V.I.; SABOV, V.A.

Mineral substances and vitamins in the food rations of the population of Transcarpathian goiter foci. Vrach.delo no.11:61-63 N '62. (MIRA 16:2)

1. Uzhgorodskiy institut ėidemiologii, mikrobiologii i gigiyeny.
(TRANSCARPATHIA--GOITER) (MINERALS IN FOOD)
(VITAMINS)

MESHCHENKO, V.M.

Importance of microareas in the territorial distribution of endemic goiter in the eradication of the endemy. Probl. endok. i gorm. 9 no.3:92-95 My-Je '63. (MIRA 17:1)

1. Iz Uzhgorodskogo instituta epidemiologii, mikrobiologii i gigiyeny.

MESHCHENKO, V.M.

Scientific conferences on medical geography. Gig. i san. 28 no.7:102-103 Jl '63. (MIRA 17:1)

MESHCHENKO, V.M.

Role of some sanitary factors in the etiology of endemic goiter. Gig. sanit. 28 no.2:98-101 '63 (MIRA 17:2)

1. Iz Uzhgorodskogo instituta epidemiologii, mikrobiologii i gigiyeny.

MESHCHENKO, V.M.; KOTELYANSKAYA, L.I.: ERIKSON, T.P.

Medicogeographical aspects of dental caries in the Transcarpathian Province. Stomatologiia 42 no.4:3-9 Jl-Ag'63
(MIRA 17:4)

1. Iz sektora meditsinskoy geografii Instituta geografii Sibiri i Dal'nego Vostoka Sibirskogo otdeleniya AN SSSR i Uzhgorodskogo instituta epidemiologii, mikrobiologii i gigiyeny.

MESHCHENKO, V.M. (Irkutsk)

"Iodine content in the foodstuffs of local origin in districts of the Bashkir A.S.S.R. with various incidence of endemic goiter" by L.F.Romysh, R.L.Patent, G.IA.Godes. Reviewed by V.M.Meshchenko. Vop. pit. 24 no.2:94 Mr-Ap '65. (MIRA 18:8)

MESHCHERIN, G.

"To Strengthen Interest in Radio-Technical Knowledge,"
"For a System of Organization and High Quality of Work,"
Soviet journal "Radio," Issue No. 4, 1952.

MESHCHERIN, G., MARGULIS, M.

MESHCHERIN, G., MARGULIS, M.

Radio broadcasting

For better organization and high quality work.
Radio, No. 4, 1952.

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

1. MOSHCHERIN, G.; [illegible], M.

2. USSR (600)

4. Radio - Stations

7. Organization for the prevention of breakdowns at radio-stations. Sov. sviaz. 3 No. 1, 1953.

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

MESHCHERIN, G.N.; MARGULIS, M.A., starshiy inzhener.

Solving the task of providing complete radio service in rural areas. Vest.sviazi 14 no.11:22-23 N '54. (MLRA 8:1)

1. Nachal'nik Kiyevskoy direktsii radiotranslyatsionnoy seti. (Radio)

USSR/Miscellaneous - Cost accounting

Card 1/1 : Pub. 133 - 9/19

Authors : Meshcherin, G. N., and Marchenko, G. P.

Title : Experiment in introducing cost accounting to the radio rebroadcasting network in Kiyev

Periodical : Vest. svyazi 6, 18-19, June 1955

Abstract : Problems regarding the economic operation of radio rebroadcasting units and the introduction of cost accounting, are discussed. Some data on the overall cost of operation of the Kiyev radio rebroadcasting network, for 1951-1954, is given.

Institution : .....

Submitted : .....

MESHCHERIN, M.A.

USSR/ Miscellaneous - Radiofication

Card 1/1 Pub. 133 - 14/23

Authors : Meshcherin, M. A., Director of the KIEV Radio-Relay Network; and Margulis, M. A., Chief Engineer

Title : The concrete solution of the problem of overall radiofication of rural localities

Periodical : Vest. svyazi 11, 22-23, Nov 1954

Abstract : The work on radiofication of the various rural districts of the KIEV region since 1952 is reviewed and information is given on the works planned and equipment required for completing the radiofication of all the KIEV-region villages. The plan calls for the installation of 33 radio-centers, 20,000 kilometers of wire-lines, 90,000 radio-sets, and 240,000 radio-outlet points (speakers). A number of replacement and spare parts required is also listed. Illustrations.

Institution: .....

Submitted: .....

1. KHAYN, A. F.; MESHCHERIN, N. A.; SHUR, L. N.

2. USSR (600)

4. Screw-Cutting Machines

7. Grinding thread milling cutters with a multiple grinding wheel. Sel'khozmashina No. 5, 1953.

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

MESHCHERIN, V.

New stage in the work of the Antarctic expedition. Blok.agit. vod.transp. no.21:1-9 N '56. (MLRA 9:12)
(Antarctic regions)

MESHCHERIN, V. T.

Shtampo-svarnye staniny tokarnykh stankov i pressov. (Vestn. Mash., 1949, no. 6, .p. 12-15)

(Stamped and welded bed frames of lathes and presses.)

DLC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

MESHCHERIN, V. T.

Spravochnik po listovoi shtampovke i shtampam. Moskva, Gos. izd-vo mestnoi promyshl. RSFSR, 1950. 314, (2) p. diagrs., tables.

Bibliography: p. 314-(315)

(Handbook of sheet-metal work and dies.)

DLC: TS250.M48

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

1. MESHCHERIN, V.T.

2. USSR (600)

4. Technology

7. Sheet Stamping. Mashgiz,1951

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

MESHCHERIN, V. T.

Tekhnologiia shtampovki [Technology of stamping]. Moskva, Mashgiz, 1953. 96 p.

SO: Monthly List of Russian Accessions, V-1 6 No 4, July 1953

MESHCHERIN, V.T., professor.

[Stamped and welded parts; a book of sketches] Shtamposvarnye detali; al'-bom eskizov. Moskva, Gos.izd-vo mestnoi promyshl. RSFSR, 1953. 34, 88 p. (MLRA 6:7)
(Sheet-metal work)

MESHCHERIN, V.T., doktor tekhn. nauk, prof.

Certain aspects of the die stamping and welding of parts. Sbor. MOSSTANKIN no.3:9-25 '55. (MIRA 13:3)
(Sheet-metal work) (Machinery--Welding)

AID P - 5085

Subject : USSR/Engineering

Card 1/2 Pub. 128 - 14/26

Author : Meshcherin, V. T., Prof., Dr. Tech. Sci.

Title : Ways of increasing the operating efficiency in sheet-metal stamping industry.

Periodical : Vest. mash., 5, 50-59, My 1956

Abstract : Despite the great recent development of sheet-metal stamping in Soviet machine building, the technique of stamping, according to the author, has not attained the high level to be found in some "advanced capitalistic countries." The author recommends following measures for improving the metal-sheet stamping production in the USSR: 1) Efficient organization of metal-sheet stamping production. 2) New stamping processes. 3) New designs of the stamping equipment. 4) More efficient use of the present equipment. 5) Increasing the speed

AID P - 5085

Vest. mash., 5, 50-59, My 1956

Card 2/2 Pub. 128 - 14/26

of machining.

Institution : None

Submitted : No date

MESHCHERIN, V. T. (Professor, Doctor of Technical Sciences)

"Present-day Status and Problems in the Technology of Sheet Stamping" p. 214 in book Modern Trends in the Field of Machine Building Technology: Collection of Articles, Moscow, Mashgiz, 1957 363 p.

The author outlines and discusses the following factors effecting labor productivity: 1) technological features of piece parts stamped out of sheet metal 2) quality of sheet metal 3) technological processes 4) full utilization of the productive capacity of the press 5) deformation rates, and 6) perfection of equipment. Working conditions, precision of stamped piece parts, cost of dies, etc., are also discussed. There are no references.

SOV/1946

PHASE I BOOK EXPLOITATTION

25(7)

Meshcherin, Vladimir Timofeyevich, Doctor of Technical Sciences, Professor

Listovaya shtampovka; atlas skhem (Cold Stamping; Atlas of Drawings) 2nd ed., ispr. i dop. Moscow, Mashgiz, 1958. 140 p. 5,000 copies printed.

Ed. of Publishing House: G.M. Grushevskaya; Tech. Ed.: A.F. Uvarova; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S.Ya. Golovin, Engineer.

PURPOSE: The atlas is intended for designers and process engineers working in stamping and for students of mechanical engineering vtuzes.

COVERAGE: This book contains numerous schematic drawings of dies and diagrams of stamping processes and presents some of the essentials of design of dies. Schematic drawings of a number of

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Cold Stamping; Atlas of Drawings

universal and simplified dies, typical subassemblies of dies, and various feed mechanisms for raw material and semi-finished products are discussed. The author thanks L.N. Bogomalova, A.G. Anikeyev, V.I. Gcryainov, Ye.N. Lanskoy, and Vikt. T. Meshcherin. V.V. Nikolayev edited the atlas section of this book. The Table of Contents lists 492 drawing and diagrams in all on 108 pages. There are no references.

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Cold Stamping; Atlas of Drawings

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Progressive die, detail drawings not required		6
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Blanking and piercing dies	56 to 81	10 to 17
Cut-off dies	82 to 91	17 to 21
Trimming and notching dies	92 to 97	21 to 22
Bending and forming dies	98 to170	23 to 39

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Cold Stamping; Atlas of Drawings

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Universal dies	430 to 439	80 to 84
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AVAILABLE: Library of Congress (TS 250.M47)

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SOV/2294

25(1,5) PHASE I BOOK EXPLOITATION

Moscow. Dom nauchno-tekhnicheskoy propagandy imeni F.E. Dzerzhinskogo

Novoye v tekhnologii vysokoproizvoditel'noy listovoy shtampovki; sbornik trudov konferentsii (New Features in the Methods of High-productivity Sheet Metal Stamping; Collection of Conference Transactions) Moscow, Mashgiz, 1959. 228 p. 8,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Resp. Ed.: V.T. Meshcherin, Doctor of Technical Sciences, Professor; Eds.: V.D. Golovlev, Candidate of Technical Sciences, Docent, and Ye.N. Lanskoy, Candidate of Technical Sciences, Docent; Ed. of Publishing House: G.N. Sokolev; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S.Ya. Golovin, Engineer.

PURPOSE: This collection of papers is intended for engineers and technicians in sheet metal stamping. It may also be useful to

Card 1/9

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New Features (Cont.)

students of vuzes and tekhnikums.

COVERAGE: This collection deals with the design and features of some current problems in sheet metal stamping. Also discussed are processing methods still in the experimental stage. Several articles deal with the mechanization and automation of stamping processes and describe recently developed methods, such as explosion forming, the use of automatic rotary transfer lines, and press blocking with the use of radioactive isotopes. No personalities are mentioned. References follow several of the articles.

TABLE OF CONTENTS:

Preface

Meshcherin, V.T., [Doctor of Technical Sciences, Professor, Stankoinstrumental'nyy institut, Moskva (Moscow Machine Tool and Instrument Institute]. Basic Manufacturing Problems of the Near Future

Card 2/9

New Features (Cont.)

Freydlin, A.Ya. [Candidate of Technical Sciences, Gor'kovskiy avtozavod (Gor'kiy Motor Vehicle Plant)]. Problem of Increasing the Number of Strokes on Presses 49
The influence of the speed of deformation on properties of metals is mentioned, and the effect of the working speed on the behavior of metals during cutting and forming operations is discussed. Information on the characteristics and design of different types of presses is presented.

Isachenkov, Ye.I., [Candidate of Technical Sciences]. Bases for Selection of Lubricants for High-productivity Sheet Metal Forming 67
The influence of friction forces on the course of the forming process is explained. Distribution of stresses and its relation to lubrication is described. The use of hydrodynamic [wedge film] lubrication is discussed; formulas for forces and stresses in the drawing process are derived; and the effect of temperature increases on the viscosity of lubricants is treated.

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

New Features (Cont.)

Gorbunov, M.N. [Candidate of Technical Sciences, Docent, Aviatsionno-tekhnologicheskiy institut, Moskva (Moscow Aviation Technology Institute)]. Significance of Local Heating of Blanks in Increasing the Productivity of Sheet Metal Stamping 85
Distribution of stresses and temperatures during local heating in the deformed zone of tabular workpieces is analyzed. Formulas are presented.

Solovtsov, S.S. [Engineer, Zavod imeni Semashko, Moskva (Moscow Plant imeni Semashko)]. Significance of Tubular Blanks and Local Preheating in Reducing Man-hours in Forming Operations 106
Advantages of using tubular blanks in making thin-walled shell-type parts by reducing and bulging operations are discussed. Local preheating for bulging is accomplished by heating the punch. Special features and the Efficiency of this method are also discussed.

Mikhalenko, F.P., [Candidate of Technical Sciences, Docent,

New Features (Cont.)

Politekhnicheskiy institut, g. Gor'kiy (Gor'kiy Polytechnical Institute)]. Special Features of Blanking With an Increased Number of Strokes 131

The author describes research done on this process in the cold-stamping department of the "Trud" Plant and the laboratory of the Department of Machinery and Metal Forming, GPI imeni A.A. Zhdanov. A.A. Samoylov, department head, and N.S. Gilevich, process engineer, took part in the investigations made at the "Trud" Plant, and K.V. Semenov, Candidate of Technical Sciences, participated in the work done at GPI. The article describes changes in punch and die dimensions and clearances in relation to changes in the number of strokes per minute and the number of parts cut out. Optimum clearances, minimum resistances, punching forces and energy consumption at various working speeds are discussed.

New Features (Cont.)

Artes, A.E. [Engineer, Moscow Machine Tool and Instrument Institute]. Press Blocking With the Use of Radioactive Isotopes 148

The article presents information on the use of beta-radiation to stop presses in processes where two or more blanks are being fed, and on the principle of operation and the description of a beta-ray electronic relay. Suggestions for placing the emitter and receiver are given, and safety measures are discussed.

Artem'yev, S.I. [Engineer, Gorkiy Motor Vehicle Plant]. New Features in the Automation of Sheet Metal Stamping at the Gorkiy Motor Vehicle Plant 160

The article discusses devices for automatic removal of formed parts from the press, devices for automatic feeding of sheet metal into the die, and devices for complete automation of the forming process.

New Features (Cont.)

Nikolayev, V.V., and B.V. Sorokin [Avtozavod imeni Likhacheva, Moskva (Moscow Motor Vehicle Plant imeni Likhachev)]. Experience of the Motor Vehicle Plant imeni Likhachev with High-productivity Progressive Die Sets 169
Compound, combination, and progressive die sets with rectilinear and circular feeding motion of blanks are described. Mechanization of feeding and removal of stamped parts and scrap are discussed.

Filina, I.S. [Engineer, Zavod "Krasnaya Zarya," Leningrad (Leningrad "Red Sunrise" Plant)]. Transfer Machine for Mixing Contact Springs 199
Arrangement and operation of a universal transfer machine for making springs for flat relays is described. Reductions in costs, time, and man-hours are shown.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

New Features (Cont.)

Konovalova, I.I. [Engineer, Zavod "Metalloizdeliye", Leningrad (Leningrad Metal Products Plant)]. Transfer Machines for Making Safety-razor Blades 206
Fabricating processes and machinery for automatic lines are described, and information on tool life, heat treatment, grinding, and packing of blades is given.

Lanskoy, Ye.N. [Candidate of Technical Sciences, Docent, Moscow Machine Tool and Instrument Institute]. Selection of a Crank Press for Required Force and Work Parameters 217
The author discusses flywheel effect, the meaning of nominal force (capacity), the magnitude of force at various angles of the crank, the work delivered by motor and flywheel, and the work of deformation. Recommendations for selecting the proper press for a given stamping operation are presented.

AVAILABLE: Library of Congress

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10-21-59

PHASE I BOOK EXPLOITATION SOV/5440

Moscow. Stankoinstrumental'nyy institut.

Issledovaniya v oblasti shtampovochnogo proizvodstva; sbornik No. 5 (Investigations of Die-Forging Processes; Collection of Articles no. 5) Moscow, Mashgiz, 1960. 175 p. 2,500 copies printed.

Sponsoring Agency: Moskovskiy stankoinstrumental'nyy institut imeni I.V. Stalina. Kafedra "Oborudovaniye i tekhnologiya kovki i shtampovki."

Ed. (Title page): V.T. Meshcherin, Doctor of Technical Sciences, Professor; Ed. of Publishing House: Yu.L. Markiz; Tech. Eds.: V.D. El'kind and L.P. Gordeyeva; Managing Ed. for Literature on Hot-Processed Metals: S.Ya. Golovin, Engineer.

PURPOSE: This collection of articles is intended for engineers and technical personnel in the field of die forming.

COVERAGE: The articles are concerned, in general, with the question of increasing productivity and accuracy in die forming and simultaneously decreasing metal

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Investigations of Die-Forging Processes (Cont.) SOV/5440

consumption. The following are also discussed: increasing the accuracy in determining individual process parameters; the fundamentals of new, highly productive stamping processes; the strength and rigidity of press frames; the effect of the kinematic parameters of mechanisms and fluid drives on the productivity of presses; and the improvement of heating-furnace performance. The articles are based on the results of scientific research investigations performed in recent years at the Department of Forging and Stamping Equipment and Processes of the Moscow Institute of Machine Tools and Instruments imeni V.I. Stalin. Most of the research and experimental work carried out at the Department's laboratory has been directed toward an increased productivity and accuracy of stamping operations and thus a more economical use of metal. No personalities are mentioned. References accompany individual articles. There are 46 references: 42 Soviet and 4 German.

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Meshcherin, V.T., [Doctor of Technical Sciences, Professor], and V.I. Goryaynov [Candidate of Technical Sciences, Docent,]. Methods of Constructing a Force Diagram for Sheet [-Metal] Drawing 5

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Investigations of Die-Forging Processes SOV/5440

Storozhev, M.V. [Candidate of Technical Sciences, Docent]. Flexure of Hydraulic-Press Columns 95

Rozanov, B.V. [Candidate of Technical Sciences, Docent], and M.D. Mirles [Engineer]. The Effect of the Elasticity of a Hydraulic-Press System [Oil and Construction] on the Speed Characteristics of the Press 126

Sinitskiy, V.M. [Engineer]. The Action of the Valves of a Crank-Type Plunger Pump for a Hydraulic-Press Drive 135

Kasenkov, M.A. [Candidate of Technical Sciences, Docent]. Automatic Regulation of the Thermal Regime of Heating Furnaces 157

AVAILABLE: Library of Congress

VK/wrc/gmp
8-26-61

Card 4/4

GORBUNOV, Mikhail Nikolayevich, kand.tekhn.nauk; MESHCHERIN, V.T., prof., doktor tekhn.nauk, retsenzent; SIROTIN, A.I., red.izd-va; KL'KIND, V.D., tekhn.red.

[Stamping parts of tubular billets] Shtampovka detalei iz trubchatykh zagotovok. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1960. 189 p. (MIRA 14:3)
(Forging)

MESHCHERIN, Vladimir Timofeyevich, doktor tekhn. nauk, prof.; CHARNKO, Donat Vladimirovich, prof.; MELESHKEVICH, P.S., inzh., retsenzent; OSIPOVA, L.A., red. izd-va; SOKOLOVA, T.F., tekhn. red.; EL'KIND, V.D., tekhn. red.

[Technology of manufacturing forging and sheet metal working equipment] Tekhnologiia proizvodstva kuznechno-shtampovochnogo oborudovaniia i shtampovoi osnastki. Moskva, Mashgiz, 1961. 375 p. (MIRA 15:2)
(Forging machinery) (Sheet metal working machinery)
(Dies (Metalworking))

3/137/61/000/011/049/123
A060/A101

AUTHORS: Meshcherin, V. T., Artes, A. E., Yanushkovskiy, V. A

TITLE: Radioactive method of active control in automatic stamping

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1961, 30, abstract 11D169 (V sb. "Radioakt. izotopy i yaderm. izlucheniya v nar. kh-ve SSSR. V. 3", Moscow, Gostoptekhizdat, 1961, 17-22)

TEXT: The authors describe methods of radioactive control of the thickness of stock in automatic stamping. the correctness of the position and orientation of the stock in automatic stamping and transporting. radioactive method of counting parts, the principle of an automatic meter of the distance between the planes of the heads of a forging hydropress.

M. Tsibanova

[Abstracter's note: Complete translation]

Card 1/1

BOBRYNIN, Boris Nikolayevich, kand. tekhn.nauk; MESHCHERIN, V.T., doktor tekhn.nauk, prof., retsenzent; MIKHALENKO, F.P., kand. tekhn. nauk, red.; RAGAZINA, M.F., inzh., red.izd-va; SMIRNOVA, G.V., tekhn. red.

[Technology of die stamping of nonmetallic materials] Tekhnologiia shtampovki nemetallicheskikh materialov. Moskva, Mashgiz, 1962. 239 p. (MIRA 15:7)
(Nonmetallic materials) (Plastics—Molding)

ISACHENKOV, Ye.I.; MESHCHERIN, V.T., doktor tekhn. nauk, prof., retsenzent; MARKIZ, Yu.L., red. izd-va; SMIRNOVA, G.V., tekhn. red.

[Forming with rubber and fluids]Shtampovka rezinoi i zhidkost'iy. Moskva, Mashgiz, 1962. 327 p. (MIRA 15:12)
(Sheet-metal work)

MESHCHERIN, V.T., doktor tekhn.nauk, prof.

New noncontact control system for the automation of stamping operations by means of radioisotopes. Sbor. MOSSTANKIN no.6:5-21 '62. (MIRA 15:12)

(Electronic control) (Radioisotopes—Industrial applications) (Sheet-metal work)

MESHCHERIN, V.T., doktor tekhn.nauk, prof.; ARTES, A.E., kand.tekhn.nauk; LANSKOY, Ye.N., kand.tekhn.nauk, dotsent; SOLOVTSOV, S.S., kand.tekhn. nauk, dotsent

Control-blocking noncontact systems with radioactive pickups for stamping and forging. Sbor. MOSSTANKIN no.6:22-60 '62. (MIRA 15:12)
(Radioisotopes—Industrial applications) (Forging)
(Electronic control)

MESHCHERIN, V.T., doktor tekhn.nauk, prof.; LANSKOY, Ye.N., kand.tekhn.nauk, dotsent; POKROVSKIY, V.B., assistent

Volumetric proportioning of billets for stamping with noncontact units. Sbor. MOSSTANKIN no.6:110-120 '62. (MIRA 15:12)
(Sheet-metal work) (Radioisotopes—Industrial applications)

B/137/62/000/011/009/045
A052/A101

AUTHORS: Meschtscherin, W. T., Artes, A. E.

TITLE: Radioactive control method in automatic sheet processing

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 12, abstract 11D63 ("Maschinenbautechnik", v. 11, no. 3, 1962, 119 - 122, German)

TEXT: The chair for stamping technology of the Moscow Machine Tool Building Institute has developed a new method of contactless sheet thickness measuring based on utilization of β-radiation of radioactive isotopes. This method is used to control the work of supplying, removing and other transport mechanisms in the automatic stamping of various elements from a sheet. An automatic sheet thickness control is realized by measuring the deviation of the actual sheet thickness from the desired. This is achieved by selecting the radiation source activity in the way that a change of the β-ray intensity after passing through a sheet can be recorded by instruments. As a source of β-radiation Sr^{90} can be used with a half-life of 30 years. By means of Sr^{90} radioactive isotopes a steel sheet up to 1 mm thick, a 3-mm sheet and other materials with a thickness proportional to

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A052/A101

Radioactive control method in automatic...

their density can be examined. As a -ray receiver a CTC-5 (STS-5) low-voltage gas discharge counter is used which converts -rays into electric pulses amplified in an electron relay amplifying unit. By means of a relay setup mounted on the output of the amplifier an intolerable deviation of the processed piece thickness from the tolerable one can be detected and a corresponding signal can be sent to the press control system. The relay setup lets blanks of a correct thickness pass into the deformation zone and switches off the press clutch when blanks with a thickness beyond tolerance limits enter the deformation zone. Using Sr^{90} as a radioactive source at a recording device sensitivity of 600 pulses per sec, it is possible to sort out sheet pieces by the thickness from 0.3 to 1.0 mm through every 0.2 mm. A calculation of the -ray source activity depending on the measured sheet thickness is given, as well as of the distance and number of radioactive pulses per second. The problem of utilization of reflected -ray properties to control production processes is considered. A number of sketches and graphs illustrating the -ray application to the control of various production processes is presented.

G. Loktionov

[Abstracter's note: Complete translation]

Card 2/2

L 62483-65 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(z)/
EWP(b)/EWP(l)/EWA(c) DIAAP MJW/JD/WW UR/0113/65/000/007/0036/0037
ACCESSION NR: AP5018151 531.717:539.165.3

AUTHORS: Meshcherin, V. T. (Doctor of technical sciences); Devyatova, Ye. M.

TITLE: Use of beta-radiation to control metal thickness in areas of maximum deformation of automobile fuel tanks

SOURCE: Avtomobil'naya promyshlennost', no. 7, 1965, 36-37

TOPIC TAGS: metal thickness measurement, sheet metal forming, deep drawing, isotope thickness gage / 08Yu steel, STS 5 radiation counter

ABSTRACT: The use of isotopes in detecting the amount of deformation or cracks in deep-drawn parts of sheet metal (0.8-1.2 mm thick, steel 08Yu used in the experiments) was investigated with particular interest directed toward application in automobile fuel tank manufacturing control. Beta-radiation from isotopes was passed through sheet metal which had been decreased in thickness 0, 5, 10, 15, or 20% (by deep-drawing), and the transmitted radiation intensity was measured with STS-5 counters as a function of distance h between source and counter (10-350 mm). It was found that the transmitted radiation increased by 16-20% with increased deformation from 0-20% (approximately linearly) at all distances, while the transmitted radiation intensity magnitude decreased by a factor of about 2 as the

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ACCESSION NR: AP5018151

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distance increased from 10-350 mm. Cracks (0.2 mm and 1.2 mm wide and L = 10-60 mm long) were machined into sheet metal samples and also obtained by deep-drawing, and transmitted radiation was measured as a function of h and L. It was found that radiation intensity increased sharply between L = 10-20 mm (factor of 4 for h = 50 mm, 0.2 mm crack width; factor of 15 for 1.2 mm crack, h = 55 mm), and then remained constant (with increasing L). Radiation transmitted through cracks was 30-20% higher for cracks obtained by deep drawing than for machined cracks. The isotope laboratory of the Moscow Automobile Factory (im. Likhachev) participated in the experiments. Orig. art. has: 1 formula and 4 figures.

ASSOCIATION: Moskovskiy stankoinstrumental'nyy institut (Moscow Machinery Instrumentation Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: IE

NO REF SOV: 001 OTHER: 000

Card 2/2

ACC NR: AP7003520 (A) SOURCE CODE: UR/0113/67/000/001/0037/0038

AUTHORS: Mosheherin, V. T. (Doctor of technical sciences); Tsekman, S.

ORG: Moscow Machine Tool Institute (Moskovskiy stankoinstrumental'nyy institut)

TITLE: Deep drawing of a flat object with cross sections of uneven strength

SOURCE: Avtomobil'naya promyshlennost', no. 1, 1967, 37-38

TOPIC TAGS: metal drawing, metalworking, metal deformation, metal pressing, metal stamping, steel, low carbon steel, lubricating oil/ MS lubricating oil, 10 steel

ABSTRACT: Two techniques were studied for producing uneven strength in the cross sections of low carbon steel stock used in deep drawing. The work was done because of the frequent necessity to draw such steel into deep cylindrical vessels. To perform such a drawing as a single operation requires a drawing coefficient (m_1) of 0.42--0.49. (Here $m_1 = \frac{d_1}{D}$, where d_1 is the diameter of the finished product and D is the diameter of the flat stock.) It is impossible to obtain a $m_1 < 0.5$ without preheating unless the danger zone is strengthened. The tests were performed on a 63-ton double action crank press, using 1.2- to 1.24-mm thick stock. The diameter of the finished vessel was 75 mm, the gap between the punch and the die was 1.40 mm, the radius of curvature of the die was 12 mm, and the lubricant was MS machine oil. From the studies of

UDC: 621.983:62-41.001.5

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thickness changes of the material, it was decided to strengthen a circular area of 65-mm inside diameter and 95-mm outside diameter. After mechanical strengthening by a 6--10% cold deformation of the danger zone, a 1-mm thick sheet of 10 steel was drawn with a $m_1 = 0.5$. Ruptured bottoms were found in 80% of the vessels similarly drawn from unstrengthened stock. Further mechanical processing was found ineffective because the increased strength was offset by a reduced thickness. To produce a thickened danger zone, the excess material was cut away. A 20% thickening of the danger zone reduced m_1 from 0.49 to 0.42. Further thickening was ineffective, partially because the location of the danger zone shifted during the drawing operation. Orig. art. has: 3 figures.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 005

Card 2/2

MESHCHERIN, V.T.; TRUSOV, V.A.

Investigating the mechanics of the process of cutting a round rod. Kuz.-shtam.proizv. 5 no.5:8-11 My '63. (MIRA 16:9)

MESHCHERIN, G. N. and BULYGIN, I. V.

Moshchnyi Kievskii radiouzel. [The Kiev powerful radio broadcasting and receiving unit]. (Vestnik sviazi. Elektrosviaz', 1947, no. 3, p. 5-7). DLC: TK4.V45

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

MESHCHERIN, G. N.

PA 177

USSR/Communications - Radio
Radio Stations

Mar 1947

"The High-powered Radio Center at Kiev," G N Meshcherin and I V Bulygin, 3 pp

"Vestnik Svyazi" Vol 7, No 84

Photos of equipment and description of a new 50-kw Radio Center. Completion of the center permits Kiev rebroadcasting net to function continuously with high fidelity performance

177

238T52

MESHCHERIN G.N.

USSR/Electronics - Wired Radio

Apr 52

"For Organized and High-Quality Operation (From the Experience of the Kiev Oblast Administration of Wired Radio Networks)," G. Meshcherin and M. Margulis

"Radio" No 4, pp 3-4

Notes achievements brought about by Kiev DRTS by proper organization of tech exploitation of wired radio centers, education of workers, introduction of efficiency suggestions, etc. The yearly [1951] plan for the installation of loudspeakers was fulfilled by more than 20%.

238T52

MESHCHERIN, V. T. PA 37/49T71

USSR/Engineering Sep 48
Forging
Stamping, Metal

"Fifteen Years of Training Engineers in Stamping, Drop Forging and Stamping Equipment," Prof V. T. Meshcherin, Dir, Chair of Equipment and Tech of Forging and Stamping, STANKINA, 1 p

"Vest Mashinostroy" Vol XXVIII, No 9

There is a shortage of technicians in this branch of industry. Outlines training program, giving names of some past and present members of the faculty. Includes photograph.

[redacted] 37/49T71

MESHCHERIN, V.T., professor.

Economizing metals in sheet stamping. (In: Ryzhkov, D.A., ed. Ekonomiia metallov v kuznechno-shtampovochnom proizvodstve. Moskva, 1953. p.194-206.)
(MLRA 7:1)
(Forging) (Punching machinery)

MESHCHERINA, O.Ye.

DZHOROGYAN, G.A., nauchnyy sotrudnik; ZIBEL', B.Ya., inzh. [translator]; MESHCHERINA, O.Ye., bibliograf [translator]; KOZ'MINA, N.P., doktor biol.nauk, otvetstvennyy red.; GRIGOR'YEV, K.P., inzh., red.; KUPRITS, Ya.N., doktor tekhn.nauk, prof., red.; KUPRIYANOV, A.V., inzh., red.; LYUBARSKIY, L.N., doktor sel'skokhozyaystvennykh nauk, prof.red.; LANDA-DALEV, L.M., starshiy nauchnyy sotrudnik; GERZHOY, A.P., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; FEDOSOVA, N.I., red.; GOLUBKOVA, L.A., tekhn.red.

[Drying and heat processing of grain; translations and abstracts] Sushka i termicheskaia obrabotka zerna; perevody i referaty. Moskva, Izd-vo tekhn. i ekon.lit-ry po voprosam mukomol'no-krupianoi, kombikormovoi promyshl. i elevatorno-skladskogo khoz., 1957. 90 p. (MIRA 11:5)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov ego pererabotki. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov ego pererabotki (for Dzhorogyan, Gerzhoy, Meshcherina). 3. Mel'kombinat imeni TSyurupy (for Zibel')
(Grain--Drying)

KARIMOV, Sh.M.; MESHCHERINA, Ye.M.

Connection of leishmaniasis in dogs with human leishmaniasis. Zdrav. Turk. 4 no.4:21-24 Jl-Ag '60. (MIRA 13:9)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. O.Ya.Rezhabek) Turkmenskogo gosudarstvennogo meditsinskogo instituta im. I.V. Stalina i Ashkhabadskogo instituta epidemiologii i gigiyeny (dir. - dotsent Ye.S. Popova).

(DELHI BOIL)

MESHCHERINA, Ye.M. (Belova); YEY, B.N.; KARIMOV, Z.M.

New foci of visceral leishmaniasis in Mary Province of the Turkmen S.S.R. Med.paraz.i paraz.bol. no.5:597-599 '61.
(MIRA 14:10)

1. Iz Ashkhabadskogo instituta epidemiologii i gigiyeny Ministerstva zdravookhraneniya Turkmenskoy SSR (dir. instituta Ye.S. Popova).

(MARY PROVINCE--KALA-AZAR)

MESHCHERINA, Ye.M.; YEY, B.N.; KARIMOV, Z.M.

Some data on internal leishmaniasis in Mary Province. Zdrav. Turk. 5 no.1:15-17 Ja-F '61. (MIRA 14:6)

1. Iz Ashkhabadskogo instituta epidemiologii i gigiyeny (dir. - dotsent Ye.S.Popova).
(MARY PROVINCE—KALA-AZAR)

ANIKIN, Nikolay Aleksandrovich; DROBYSHEVSKAYA, Nadezhda Ivanovna; DUDINOV, Vladimir Alekseyevich; KON'KOV, Arkadiy Sergeyevich; KONYUKHOV, Sergey Mikhaylovich; MESHCHERINOV, Fedor Ivanovich; POLETSKIY, Aleksandr Timofeyevich; POLYAKOV, Gleb Maksimovich; SAL'NIKOV, Oleg Alekseyevich; CHERNOBAY, Dmitriy Gavrilovich; GAVRILOV, P.G., kand. tekhn.nauk, retsenzent; NEFED'YEV, G.N., kand. fiz.-mat. nauk; SOKOLOV, V.M., kand. fiz.-mat. nauk; SOKOLOVSKIY, V.I., kand. tekhn. nauk; RUDIN, S.N., inzh.; EYDINOV, M.S., kand. tekhn. nauk; DUBITSKIY, G.M., doktor tekhn. nauk, red.; ZAKHAROV, B.P., inzh., red.; KONOVALOV, V.N., kand. tekhn. nauk, red.; PERETS, V.B., kand. tekhn. nauk, red.; ROZENBERG, I.A., kand. ekonom. nauk, red.; STEPANOV, V.V., kand. tekhn. nauk, red.; SUSTAVOV, M.I., inzh., red.; SHABASHOV, S.P., kand. tekhn. nauk, red.; DUGINA, N.A., tekhn. red.

[Handbook for inventors and innovators]Spravochnik dlia izobretatelia i ratsionalizatora . [By] N.A.Anikin i dr. Izd.3., ispr. i dop. Moskva, Mashgiz, 1962. 791 p. (MIRA 16:1)
(Technological innovations—Mechanical engineering)

10

L 06139-67 EWT(m) IJP(c)
ACC NR: AP6031170 SOURCE CODE: UR/0361/66/000/002/0003/0015

AUTHOR: Nemenov, L. M.; Anisimov, O. K.; Arzumanov, A. A.; Golovanov, U. N.; Yezerskiy, V. F.; Kravchenko, Ye. T.; Kruglov, V. G.; Laktionov, I. A.; Meshcherov, R. A.; Meshcherova, I. V.; Popov, Yu. S.; Prokof'yev, S. I.; Rybin, S. N.; Fedorov, N. D.

ORG: Institute of Nuclear Physics, AN KazSSR (Institut yadernoy fiziki AN KazSSR)

TITLE: Putting the Kazakhstan cyclotron into operation

SOURCE: AN KazSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 2, 1966, 3-15

TOPIC TAGS: cyclotron, proton accelerator, Mev accelerator, alpha particle / U1502 cyclotron

ABSTRACT: The U-150-2 cyclotron of the Institute of Nuclear Physics of the Academy of Sciences of the Kazak SSR is described. This cyclotron is designed to accelerate protons, deuterons, alpha particles, and multiply charged ions. Energies of 24 Mev are obtained with deuterons. Alpha particles and protons can be accelerated to 48 Mev and 20 Mev, respectively. Sixfold ionized carbon can be accelerated to 140 Mev. The magnetic field in the cyclotron necessary for 20 Mev deuteron production is 14000 oersteds; this is produced by a current of 800 amp. The necessary variation of the magnetic field with radius is obtained by the use of annular shims. The high frequency generator and its alignment is described. The dependence of beam current at various

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ACC NR: AP6031170

final radii is plotted as a function of the potential between the "dees". The authors thank engineers V. A. Borisov, B. L. Vaysman, N. G. Gladenko, senior electronic engineer D. D. Gromov, chiefs of work shifts G. A. Obraztsov and V. E. Oshkin, and chief of service A. I. Tkachev for participation in the work of setting aright the various difficulties involved in setting up the cyclotron. Orig. art. has: 11 figures.

SUB CODE: 18/20/ SUBM DATE: none

Card 2/2 mfe

MESHCHERINOVA, C...

"Effect of Boron on the Properties of Construction Steels." Cand Tech Sci, Moscow Order of the Labor Red Banner Inst of Steel imeni I. V. Stalin, Min Higher Education USSR, Moscow, 1955. (KL, No 10, Mar 55)

SO: Sum. No. 670, 29 Sep 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

PRIDANTSEV, M.V.; MESHCHERINOVA, O.N.; PIGUZOV, Yu.V.

Internal friction method for investigating the mechanism of the effect of boron on steel. Dokl.AN SSSR 111 no.1:98-101 N-D '56. (MLRA 10:2)

1. Institut stali TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii. Predstavleno akademikom I.P.Bardinym.
(Boron steel)

MESHCHERINOVA, O.N.

PHASE I BOOK EXPLOITATION SOV/1558

Moscow. Dom nauchno-tekhnicheskoy propagandy im. F.E. Dzerzhinskogo

Sovremennyye splavy i ikh termicheskaya obrabotka (Contemporary Alloys and Their Heat Treatment) Moscow, Mashgiz, 1958. 329 p. 12,000 copies printed.

Additional Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed. (Title page): Ya. A. Geller, Doctor of Technical Sciences; Ed. (Inside book): V.V. Rzhavinskiy, Engineer; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on Metal Working and Tool Making: R.D. Beyzel'man, Engineer.

PURPOSE: The book is intended for engineering and technical personnel of heat-treatment shops and test laboratories of machine-building plants.

COVERAGE: This collection of 28 articles, compiled by 35 authors, aims to acquaint the reader with modern practice in the heat treatment of steels. The authors are primarily concerned with the development of various types of structural, tool, and heat-resistant steels and with the use of their alloying elements. Materials-handling equipment is described at some length. The treatment of alloys, particularly those of titanium, also comes within the scope of the collection. The book is thoroughly diagrammed, and a good deal of the material is shown in graphical form. Among the problems dealt with are the minimization of deformations, the introduction of the automatic control of heat-treating equipment, together with fully mechanized tool manufacture, and the optimum proportions of different alloying elements. There are numerous tables and drawings. Bibliographic listings placed at the end of chapters are predominantly Soviet. The articles comprising this collection are reports delivered at a conference held in the Scientific and Technical Propaganda House imeni F.E. Dzerzhinskiy in Moscow.

Contemporary Alloys and Their Heat Treatment SOV/1558

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MESHCHERINOVA, O.N.

PHASE I BOOK EXPLOITATION SOV/1558

Moscow. Dom nauchno-tekhnicheskoy propagandy im. F.E. Dzerzhinskogo

Sovremennyye splavy i ikh termicheskaya obrabotka (Contemporary Alloys and Their Heat Treatment) Moscow, Mashgiz, 1958. 329 p. 12,000 copies printed.

Additional Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed. (Title page): Yu. A. Geller, Doctor of Technical Sciences; Ed. (Inside book): V.V. Rzhavinskiy, Engineer; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on Metal Working and Tool Making: R.D. Beyzel'man, Engineer.

PURPOSE: The book is intended for engineering and technical personnel of heat-treatment shops and test laboratories of machine-building plants.

COVERAGE: This collection of 26 articles, compiled by 33 authors, aims to acquaint the reader with modern practice in the heat treatment of steels. The authors are primarily concerned with the development of various types of structural, tool, and heat-resistant steels and with the use of their alloying elements. Materials-handling equipment is described at some length. The treatment of alloys, particularly those of titanium, also comes within the scope of the collection. The book is thoroughly diagrammed, and a good deal of the material is shown in graphical form. Among the problems dealt with are the minimization of deformations, the introduction of the automatic control of heat-treating equipment, together with fully mechanized tool manufacture, and the optimum proportions of different alloying elements. There are numerous tables and drawings. Bibliographic listings placed at the end of chapters are predominantly Soviet. The articles comprising this collection are reports delivered at a conference held in the Scientific and Technical Propaganda House imeni F.E. Dzerzhinskiy in Moscow.

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SOV/137-58-9-19953

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 266 (USSR)

AUTHORS: Pridantsev, M.V., Meshcherinova, O.N.

TITLE: Influence of Boron on the Structure and Properties of Steel (Vliyaniye bora na strukturu i svoystva stali)

PERIODICAL: Metallovedeniye i term. obrabotka. Moscow, Metallurgizdat , 1958, pp 3-20

ABSTRACT: The effect of B on Mn and Cr-Mn steels and ingot iron is investigated. It is found that introduction of up to 0.01% B reduces the critical points (by 15-20°C) and the temperature of onset of intensive growth of austenite, causes grain growth (grain growth is most rapid when B > 0.004%) and increases the hardenability of steel. Samples of large cross section undergo an increase in hardness and strength properties owing to the increase in hardenability. Introduction of B into ingot iron intensifies aging processes; this is explained by the formation of an interstitial solid solution of B in Fe and by a diminution in the solubility of C. The steel is of maximum hardenability at 0.002% B, when B is introduced in a complex with Ti, Zr, and Al in the form of graynal "79" and quenching is

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SOV/137-58-9-19953

Influ ence of Boron on the Structure and Properties of Steel

perfc rmed from 830-850°. An increase in temperature causes borides to prec pitate at the grain boundaries, and hardenability is reduced. Previous homc genation or heating for forging do not affect the hardenability of the steel B is taken up to the greatest degree (0.006%) when N is fixed in nitrides by deoxidation of the steel by Al (0.8-1.0 kg/t) and by Ti. Bibliography: 17 references.

F.U.

1. S eel--Properties 2. Iron--Properties 3. Boron--Metallurgical effects

Card 2/2

SOV/137-59-9-20364

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 9, p 203 (USSR)

AUTHORS: Rakhshtadt, A.G., Meshcherinova, O.N., Zikeyev, V.V.

TITLE: Properties and Heat Treatment of Spring Steel Alloyed With Boron

PERIODICAL: V sb.: Sovrem. splavy i ikh term. obrabotka, Moscow, Mashgiz, 1958, pp 132 - 148

ABSTRACT: The authors investigated the effect of B ($\sim$ 0.003%) on the properties of 50, 50R, 55S2, 55S2R, U8 and U8R grade steels. The investigations included σ_e, E, the coefficient of internal friction, fitness to tempering, kinetics of isothermical transformation of austenite, changes of mechanical properties in annealing and the microstructure. It was stated that the addition of 0.003% B in 50, 55S2 und U8 steels increased elastic properties of the steels and their relaxation stability. Increased fitness to tempering of 50R steel makes it possible to use it for springs of larger cross section than those of 50 steel. There are 14 bibliographical titles.

I.B.

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133-1-19/24

AUTHORS: Meshcherinova, O.N., Candidate of Technical Sciences, Posysayeva, L.I., Engineer, and Khasin, G.A.

TITLE: Metallurgical Properties of Structural Boron Steels (Metallurgicheskiye osobennosti konstruktsionnykh boristykh staley)

PERIODICAL: Stal', 1958, No.1, pp. 75 - 81 (USSR).

ABSTRACT: A systematic investigation of special features of smelting boron-containing structural steels in order to establish optimal conditions for deoxidation and introduction of boron into the metal was carried out. The smelting was done in 60-ton basic open-hearth furnaces with additions of ferro-boron or ferro-boral (the composition is given). Altogether, 126 open-hearth heats of steels of various composition were investigated (Table 1). The technology of smelting was the same as is usual for corresponding steels except for the final deoxidation which was carried out in the ladle by the following methods: 1) after the ladle was 1/5th filled, 45% ferro-silicon was added, followed by aluminium (1 kg/ton for steel 20ХГР and 0.6 kg/ton for other steels containing 0.3% or more of carbon) and lumps (40-70 mm in size) of ferro-boron or ferro-boral. Steel was teemed into 3.6-ton ingots which were passed to the blooming department in the hot state. 2) Before

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Metallurgical Properties of Structural Boron Steels

adding ferro-boron and ferro-boral, aluminium was first introduced (as in 1)) followed by ferro-titanium in a proportion of 0.03, 0.06, and 0.07% (without taking into consideration titanium losses); for steel 45P the maximu addition of titanium was 0.1%. 3) Before adding ferro-boron or ferro-boral, aluminium was added (as in 1)), then vanadium (0.05%) and ferro-boron or ferro-boral. Chemical composition of slags (from the furnace before tapping and from the ladle after teeming) and metal (from the furnace before tapping and mean during teeming) is given in Table 2. Boron losses due to oxidation in all heats investigated amounted to 40-60%. Rolling of steel containing boron did not present any difficulties, the quality of the surface of ingots and rolled metal was satisfactory. The influence of boron content on the hardenability of steel was carried out on a 60-ton heat of steel 20ХГР which was cast into ingots with various boron contents (added to ingot moulds), the latter being 0, 0.01, 0.003, 0.006 and 0.008% (Fig.1). With increasing boron content from 0.003% to 0.01% (as calculated) the hardenability of steel somewhat improved. The improvement in hardenability obtained for steels preliminarily deoxidised with titanium (Figs. 2 and 3) indicated that the efficiency of the

utilisation of boron increases when after deoxidation with aluminium, titanium is introduced in order to combine nitrogen into stable nitrides. Cross-sectional hardenability was additionally determined for steels 20ХГР and 35ХРА. Specimens of 40, 60, 80 and 100 mm in diameter and over two diameters long after preliminary normalisation were hardened in water after which the hardness along two perpendicular diameters was determined (Figs. 4 and 5). Unlike normal steels, the hardenability of some steels containing boron decreased with increasing temperature from which steel was hardened (Fig.6). The dependence of the grain size of austenite on the content of boron and kinetics of the grain growth in steels of various chemical composition was also investigated. The grain size was evaluated according to ГОСТ 5639-51 and determined by the following methods:
a) cementation at various temperatures with 8 hours soaking;
b) oxidation of grain boundaries in oxidising and vacuo furnaces;
c) obtaining ferritic network by two hours isothermal treatment at 700 °C of specimens heated to 850 - 1 150 °C at 50° intervals (soaking for 1 hour). Characteristic structures of specimens from steel 20ХГР, the composition of which differed only in the boron content is shown in Fig.7, the influence of the method of deoxidation on the grain size - Table 3, and the

Metallurgical Properties of Structural Boron Steels

kinetics of growth of austenitic grains - Fig.8. On investigating the micro-structure of specimens heated to a high temperature, the presence of excess boron phase was observed (Figs. 9 and 10). The dependence of mechanical properties on the content of boron and additions of titanium was investigated on specimens preliminarily normalised at 920 °C (6 hours), hardened in oil from 860 °C (soaking 1 hour) and tempered at 200 °C (3 hours). The dependence of impact strength of steel 20ХГР on the boron content - Fig.11. Mean mechanical properties of steels investigated - Table 4. Conclusions: 1) The size of austenitic grain depends on the amount of boron introduced; the more boron added, the coarser is the grain and the non-uniformity of grain size is more pronounced. 2) Plastic properties of steel after hardening and tempering (at a high or a low temperature), in particular, impact strength decreases with increasing boron content. 3) The negative influence of boron on the size of austenitic grain, non-uniformity of grain size and impact strength can be considerably decreased by a correct practice of the final deoxidation of steel with aluminium and titanium (when boron is introduced by additions of ferro-boron or ferro-boral), i.e. with aluminium in an amount of 1 kg/ton

Metallurgical Properties of Structural Boron Steels

when steel contains up to 0.3% of carbon and 0.6 kg/t when steel contains above 0.3% of carbon; with titanium in an amount of 0.06 - 0.1%, depending on the composition of the steel and its destination. 4) The use for final deoxidation of aluminium and titanium before adding boron secures satisfactory hardenability, sufficiently small and uniform austenitic grain and high mechanical properties of steels. 5) An additional investigation of the relationship between the composition of steel (mainly carbon content) and optimum amount of boron added is necessary. There are 4 tables, 11 figures and 4 references, 2 of which are Russian and 2 English.

ASSOCIATION: Zlatoust Metallurgical Works (Zlatoustovskiy metallurgicheskiy zavod) and TsNIIChM.

AVAILABLE: Library of Congress

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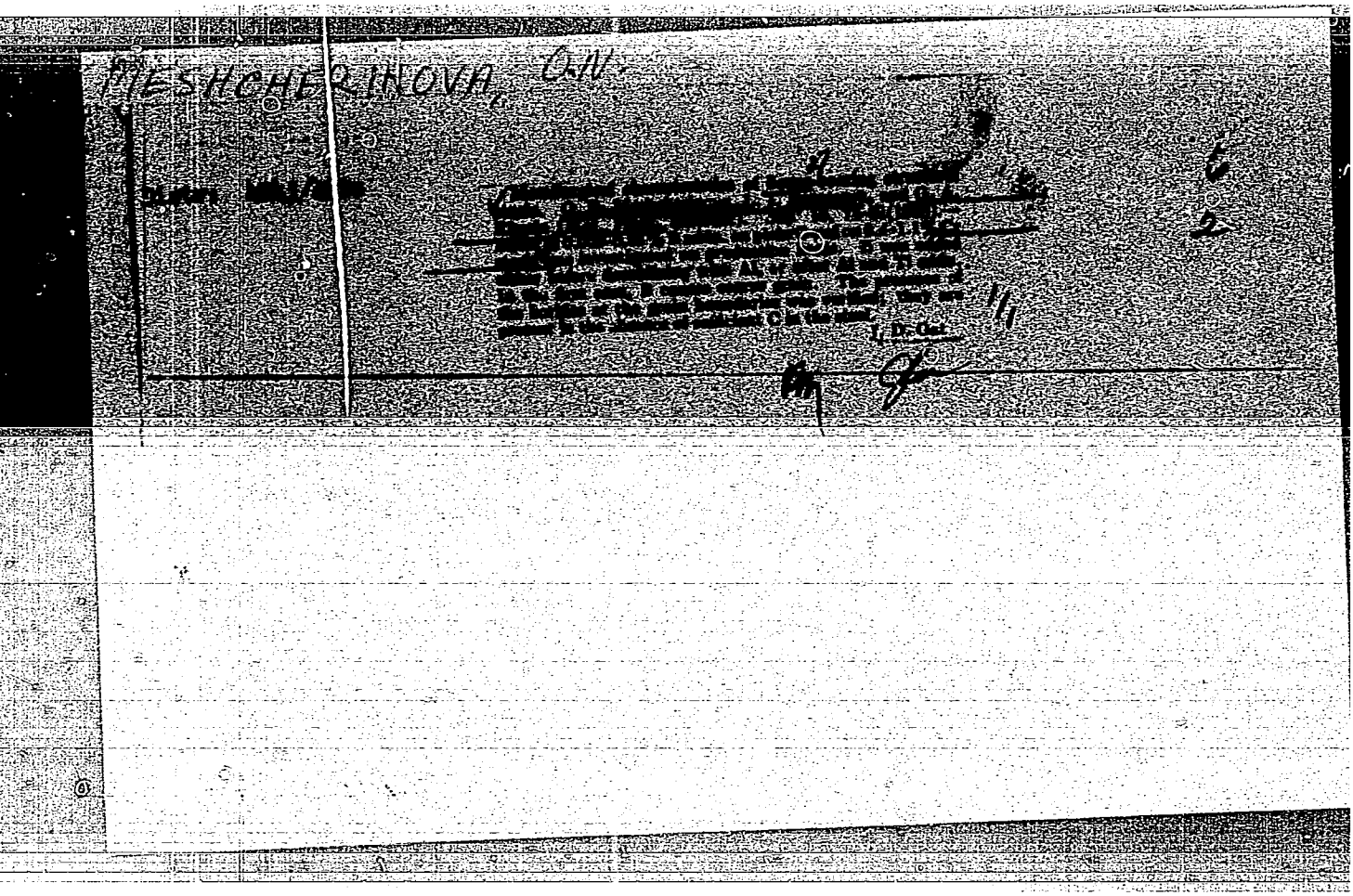

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S/123/60/000/009/002/017
A004/A001

/P.1110
Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1960, No. 9, p. 20, # 43233

AUTHORS: Rakhshtadt, A.G., Meshcherinova, O.N., Zelenskiy, G.K., Timofeyeva, G.S.

TITLE: Investigating the Properties and Heat Treatment of Boron-Alloyed Spring Steels

PERIODICAL: V sb.: Metallovedeniye i term. obrabotka. ("Stal'", 1958, Prilozh.), Moscow, 1959, pp. 93-126

TEXT: The authors give an account of the investigation results of the effect of boron (0.0017 - 0.005%) and heat-treatment conditions on the mechanical properties of the spring steel grades 50Kh (50Kh), 50KhFA (50KhFA), 55KhG (55KhG), 55KhGS (55KhGS), 55S2G (55S2G), 55S2 (55S2) and 60S2 (60S2). It is shown that small boron additions (approximately 0.003%) have a positive effect on the technological and mechanical properties of the steel grades investigated. Boron does not essentially change the granularity of austenite during heating up to 1,050°C (if the steel is preliminarily reduced with aluminum and titanium). The

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A004/A001

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strongest effect of boron on the tempering ability can be observed with the chrome-manganese, 55ХГР (55KhGR), and silicon-manganese, 55СГ2Р (55SG2R), steel grades. Steel grades with boron possess a somewhat higher E at all annealing temperatures, a higher fatigue strength and higher ductility and toughness values after isothermal hardening.

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

Card 2/2

MESHCHERINOVA, O.N., kand. tekhn. nauk; PREYGERZON, Sh.I., kand. tekhn. nauk
SHEVCHENKO, R.G., inzh.

Replacing cemented 20KhNZA and 12KhNZA steel with steel containing boron. Trakt. i sel'khozmash. no.12:40-42 D '59. (MIRA 13:3)

(Steel) (Tractors)

MESHCHERINOVA, O.N., kand.tekhn.nauk; TRIFONOVA, T.N., inzh.; TORPANOVA, G.A., kand.tekhn.nauk; SMIRNOV, Ye.V., inzh.; BABAKOV, A.A., kand.tekhn.nauk; KAREVA, Ye.N., inzh.; ZHADAN, T.A., inzh.; TALOV, N.P., inzh.; TSYPKINA, Ye.D., kand.tekhn.nauk; DORONIN, V.M., inzh.; DAVYDOVA, L.N., inzh.; PRIDANTSEV, M.V., prof., doktor tekhn.nauk, red.; LIVSHITS, G.L., kand.tekhn.nauk, red.; BERLIN, Ye.N., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[Steels with low nickel content; a handbook] Stali s ponizhennym soderzhaniem nikela; spravochnik. Pod red. M.V.Pridantseva i G.L.Livshitsa. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 200 p. (MIRA 14:12)

1. Direktor instituta kachestvennykh staley TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii im. I.P.Bardina (for Pridantsev).
(Nickel steel)

GULYAYEV, A.P., MESHCHERINOVA, O.N., TRIFONOVA, T.N.

The effect of boron on the properties of alloyed structural steels.

SPECIAL STEELS AND ALLOYS (SPETSIAL'NYYE STALI I SPLAVY), Collection of Studies, Issue 27, 240 pages, published by the State Scientific and Technical Publishing House for Ferrous and Non-Ferrous Metallurgy, Moscow, USSR, 1962.

S/133/62/000/011/005/005
A054/A127

AUTHORS: Rakhshtadt, A.G., Docent, Meshcherionova, O.N., Candidates of Technical Sciences, Gnevko, A.I., Soshnikov, S.A., Engineers

TITLE: The effect of boron and titanium on the mechanical properties and ductility of the new 55 ХГР (55KhGR) and 55СГ2Р (55SG2R) spring steels

PERIODICAL: Stal', no. 11, 1962, 1041 - 1047

TEXT: At the MVTU im. Baumana (MVTU im. Bauman) and TsNIIChM tests were carried out to improve the quality of 60 С2 (60S2), 55 С2 (55S2) and 55 ХГ (55KhG) spring steels by the addition of boron (0.003 - 0.01%) and titanium (0.06 - 0.24%). The new grades were melted in a 50-kg magnesite-lined induction furnace in the following composition (55KhGR = A', A"; 55S2GR = B', B"; 55S2 = C for control):

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Heats	Слиток	C	Mn	Si	Cr	Ti	B
A'	1	0,54	1,02	0,35	1,4	0,06	0,003
	2	0,54	1,10	0,32	1,2	0,06	0,006
	3	0,55	1,05	0,37	1,3	0,06	0,01
A*	1	0,55	1,08	0,24	1,3	—	0,003
	2	0,55	1,1	0,30	1,5	0,06	—
	3	0,55	1,04	0,32	1,30	0,09	0,003
	4	0,55	0,99	0,32	1,35	0,16	0,003
	5	0,55	0,94	0,36	1,30	0,24	0,003
ЭС	—	0,53	1,0	1,8	0,3	—	—

Heats	Слиток	C	Mn	Si	Ti	B
B'	1	0,54	1,7	1,25	0,06	0,003
	2	0,55	1,65	1,38	0,06	0,006
	3	0,55	1,7	1,40	0,06	0,01
B*	1	0,54	1,7	1,08	0,06	—
	2	0,54	1,5	1,05	0,10	0,003
	3	0,54	1,6	1,1	0,12	0,003
	4	0,54	1,65	1,15	0,24	0,003

Prior to adding boron the steel was reduced by aluminum, then titanium was added. Tests carried out to study the hardenability of the new grades showed that an addition of 0.003% boron greatly improved this property. Addition of up to 0.06% titanium to steels containing 0.003% boron improves the hardenability still further. When more than 0.06% titanium was added, however, this property of the steel deteriorated, most probably due to the crystallizing effect of titanium compounds leading to the transformation of the supercooled austenite phase. The addition of more than 0.1% titanium weakens the tendency to grain growth in the

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The effect of boron and.....

steel structure, on account of the capping effect of titanium compounds that are not dissolved in the austenite phase, not even at high (up to 1150°C) temperatures. The optimum addition both with regard to grain growth and hardening properties are 0.003% boron and 0.06% titanium. The addition of 0.06 - 0.12% titanium slightly reduces the strength of the test grades. The 55SG2R grade, containing various amounts of boron and titanium has a higher ductility than the conventional 55S2 grade. The threshold of ductility will be attained with 0.003% boron and 0.1 - 0.16% titanium. Optimum ductility for the 55SG2R grade will be obtained with annealing at 350°C, whereas for the 55KhGR grade at 300°C. In the 55SG2R grade the value of stresses reaches the maximum simultaneously with the maximum value of ductility; at the same time the microplastic friction starts developing. Spring steels containing boron and titanium show a lower tendency to decarburization (in 55KhGR grade: 0.01 mm, in 55SG2R: 0.003 mm, whereas in the 55S2 grade: 0.12 mm). The test grades proved superior to the conventional spring steels also in view of relaxation stability, which was tested under uni-axial extension at a stress of σ_o = 120 kg/mm^2. To obtain a high degree of relaxation stability, the steel must contain sufficient chrome. In general, the optimum amounts of boron and titanium added depend on the steel composition. Greater amounts of

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boron and titanium should be added to chrome-manganese steels, than to silico--manganese ones. If higher ductility is required, the boron content should be increased. The 55KhGR grade should be applied for heavy purpose springs. In structures operating under high static stresses, and where the ductility of the spring is not of primary importance, the 55SG2R grade should be used. There are 8 figures.

ASSOCIATION: MBTU im. Baumana (MVTU im. Bauman) and TsNIIChM

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S/129/62/000/012/002/013
E073/E351

AUTHOR: Meshcherinova, O.N., Candidate of Technical Sciences

TITLE: Influence of nickel and boron on the properties of steel 40 (40Kh)

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no. 12, 1962, 6 - 12

TEXT: As the use of boron to replace nickel had been found to raise the temperature of the transition-to the brittle state, the effect of nickel additions was studied on structural steels containing 0.4% C and 1% Cr, either free from boron or containing 0.003-0.004% B. The hardenability, tendency to austenite grain growth, mechanical properties as a function of the tempering temperature, brittle-fracture temperature and proneness to temper brittleness were studied. Conclusions: 1) both Ni and B increase the hardenability of steel 40Kh; the lower the hardenability in the boron-free state, the more effective will be its influence on the hardenability. Substitution of Ni by B is advisable for steels containing 0.5-1% Ni to ensure the required hardenability; addition of B to steels with 2% and more Ni has no influence on the

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hardenability; 2) the adverse influence of B on the growth of the austenitic grain ceases with Ni contents above 2%; 3) Ni and Ni combined with B have no influence on the strength; the impact strength of Ni steels and, particularly, of steels alloyed with Ni and B decreases with increasing Ni content for steels tempered in the range 400 - 600 °C; 4) alloying with Ni reduces the brittle-fracture temperature in the case of steels tempered to HRC 30 (550°C) and increases it in steel tempered to HRC 25 (650 °C). The temperature increases with boron-free steels from -60 °C (0.5% Ni) to 0 °C (4% Ni) for steel tempered at 550 °C and decreases from about -55 °C (0.5% Ni) to -80 °C (4% Ni) for steel tempered at 650 °C. The respective values for the boron-containing steels tempered at 550 °C are -20 °C (0.5% Ni) and +20 °C (4% Ni) and for the steels tempered at 650 °C are -25 °C (0.5% Ni) and -64 °C (4% Ni). This is attributed to the fact that if Cr is present, Ni increases the proneness of steel to temper brittleness which occurs during tempering in the range of 500 - 600 °C. There are 6 figures and 1 table.

ASSOCIATION: TsNIIChM

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RAKHSHTADT, A.G., dotsent, kand.tekhn.nauk; MESHCHERINOVA, O.N., kand. tekhn.nauk; GNEVKO, A.I., inzh.; SOSHNIKOV, S.A., inzh.

Effect of boron and titanium on mechanical properties and the elasticity of new 55KhGR and 55SG2R spring steels. Stal' 22 no.11:1041-1047 N '62. (MIRA 15:11)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche im. Baumana i TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Steel--Metallurgy) (Springs (Mechanism))

S/776/62/000/027/001/004

AUTHORS: Gulyayev, A.P., Meshcherinova, O.N., Trifonova, T.N.

TITLE: The influence of Boron on the properties of alloyed structural steels.

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov. no. 27. Moscow, 1962. Spetsial'nyye stali i splavy. pp. 29-46.

TEXT: The paper reports the results of laboratory tests at the Central Scientific Research Institute of Ferrous Metallurgy in an attempt to employ B additions to compensate for the reduction in hardenability that is encountered in Ni-starved structural steels; the tests were made to help alleviate the difficulties engendered in the USSR by a prevailing Ni shortage. The test series described comprises 5 groups of differently alloyed steels: (1) Cr steels with an addition of B, XP (KhR) with 1% Cr + 0.002% B; (2) Cr-Ni steels, XH (KhN), with 1% Cr, 1% Ni (the latter value dependent on the content of the naturally alloyed Khalilovo pig irons); (3) Cr-Ni steels with a B addition, XHP (KhNR), with 1% Cr, 1% Ni + 0.002% B; (4) Cr-Mn steels with B, XГP (KhGR), with 1% Mn; 1% Cr + 0.002% B; and (5) Cr-Ni-W steels with B, XHBP (KhNVR), with 1% Cr, 1% Ni, 1% W + 0.002% B. The exact compositions of the tested steels are tabulated. The paper describes: (1) The

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