ACC NR: AT6030384 (N) SOURCE CODE: UR/0000/66/000/000/0083/0090

AUTHOR: Balakin, V. A.

ORG: none

TITLE: Special characteristics of friction and wear of materials at high sliding velocities

SOURCE: AN SSSR. Nauchnyy sovet po treniyu i smazochnym materialam. Novoye v teorii treniya (Recent developments in the theory of friction). Moscow, Izd-vo Nauka, 1966, 83-90

TOPIC TAGS: The coefficient of friction depends on the following factors: the material and the state of the contact surfaces; the construction of the friction joint or unit; and the operating conditions (the sliding velocity V; the specific load F_{sp}; the temperature ϑ; and the temperature gradient $\partial\vartheta/\partial z$ in the contact zone). The article considers the motion of a real point M of mass m, which is subjected to the action of a constant vertical load P = const over an absolutely rigid wavy sinusoidal surface, for which the wavelength ℓ is significantly larger than the amplitude a ($\ell > 200a$); this is valid for a real body for which the linear dimension L is substantially less than the wavelength ($L < (\ell/5)$). On the above basis, the author develops mathematically four possible cases. It is demonstrated that in determination of the friction coefficient and the wear of materials at high sliding velocities, it

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ACC NR: AT6030384

is necessary to take into account unsteady state friction processes caused by the presence of factors such as undulations and variations in form. The author expresses his gratitude to his scientific supervisor Professor I. V. Kragel'skiy for assistance given in setting up and conducting this investigation and for discussing the results. Orig. art. has: 26 formulas and 8 figures.

SUB CODE: 11/ SUBM DATE: 22Feb66

Card 2/2 egk

16(1)
AUTHOR: Balakin, V.B.

SOV/41-11-2-10/17

TITLE: Two-Sided Approximation of the Solution of the Equation $y^{(n)} = f(x,y)$

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, 1959, Vol 11, Nr 2, pp 203-207 (USSR)

ABSTRACT: The author uses the method of differential inequations of Chaplygin [Ref 1] for the solution of

$$y^{(n)} - f(x,y) = 0$$

$$y(x_0) = y_0,\ y'(x_0) = y_0',\ldots,y^{(n-1)}(x_0) = y_0^{(n-1)}.$$

Let the function $f(x,y)$ be continuous on $[x_0,x_1]$ in x and let it satisfy in y the Lipschitz condition with the constant L. Let $z_0^{(n)} - f(x,z_0) = v_0(x) \geqslant 0$, then $z_0 \geqslant y$ on $[x_0,x_1]$. For $a(x) = z_0 - y$ we have the equation

(4) $$a^{(n)} - f(x,z_0) + f(x,y) = v_0(x)$$

with the initial conditions $a(x_0) = 0,\ a'(x_0) = 0,\ldots,a^{(n-1)}(x_0) = 0$.

Card 1/3

Instead of (4) the author considers

(5) $a_0^{(n)} + La_0 = v_0(x)$,

where L is the Lipschitz constant of f(x,y). We have

$$a_0(x) = \int_{x_0}^{x} P(x-t)v_0(t)dt,$$

where P(x-t) is a certain combination of exponential functions. Replacing in (4) a(x) by the solution of (5), then $a_0^{(n)} = f(x,y+a_0)+f(x,y)+La_0-La_0-v_0-v_0(x) = -f(x,y+a_0)+f(x,y)-La_0 \leq 0$ and herefrom $a_0 \leq a$. Consequently $z_1=z_0-a_0$ is an improved upper function in the sense of Chaplygin and it may serve as an initial function for the next approximation. It is shown that the

Two-Sided Approximation of the Solution of the Equation $y^{(n)} = f(x,y)$ SOV/41-11-2-10/17

sequence of the approximations obtained in this way converges uniformly to the solution. Then the construction of the lower approximations is carried out. An example is calculated. The author mentions K.V.Zadiraka.
There are 3 Soviet references.

SUBMITTED: June 23, 1958

Card 3/3

41562
S/208/62/002/005/008/009
B112/B102

16.6500

AUTHOR: Balakin, V. B. (Moscow)

TITLE: A numerical solution method of Cauchy's problem for divergent systems

PERIODICAL: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 2, no. 5, 1962, 925-930

TEXT: The solution of the boundary value problem

$$\oint_C u\,dx - \varphi(u)\,dt = 0 \qquad (4)$$

$$u(x,0) = u_0(x) \qquad (2)$$

is reduced to determining the level lines of the potential

$$\phi(x,t) = \int_0^x u(s,t)\,ds$$

by means of a system of ordinary differential equations

$$x' = f(u) \qquad (7)$$

Card 1/2

S/208/62/002/005/008/009
B112/B102

A numerical solution method of...

$$u(\xi,\tau) = u_0(x(0,\xi,\tau))x_\xi(0,\xi,\tau). \qquad (5)$$

The trajectories $x = x(t,\xi,\tau)$ are constructed approximately and the values of $u(x,t)$ are computed numerically along them. No theoretical foundation of the method is given but numerical results show its applicability. There is 1 figure.

SUBMITTED: March 3, 1962

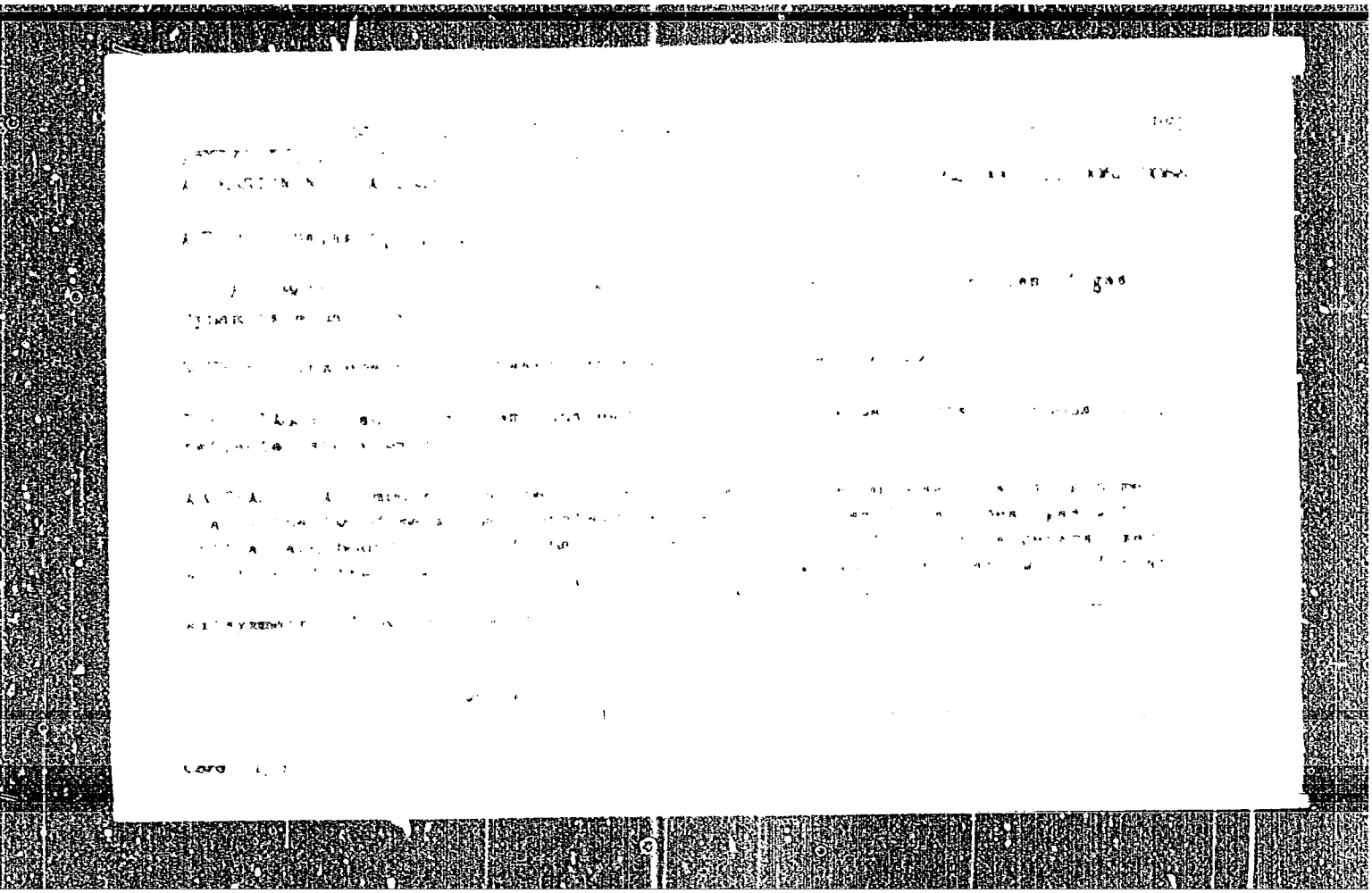
Card 2/2

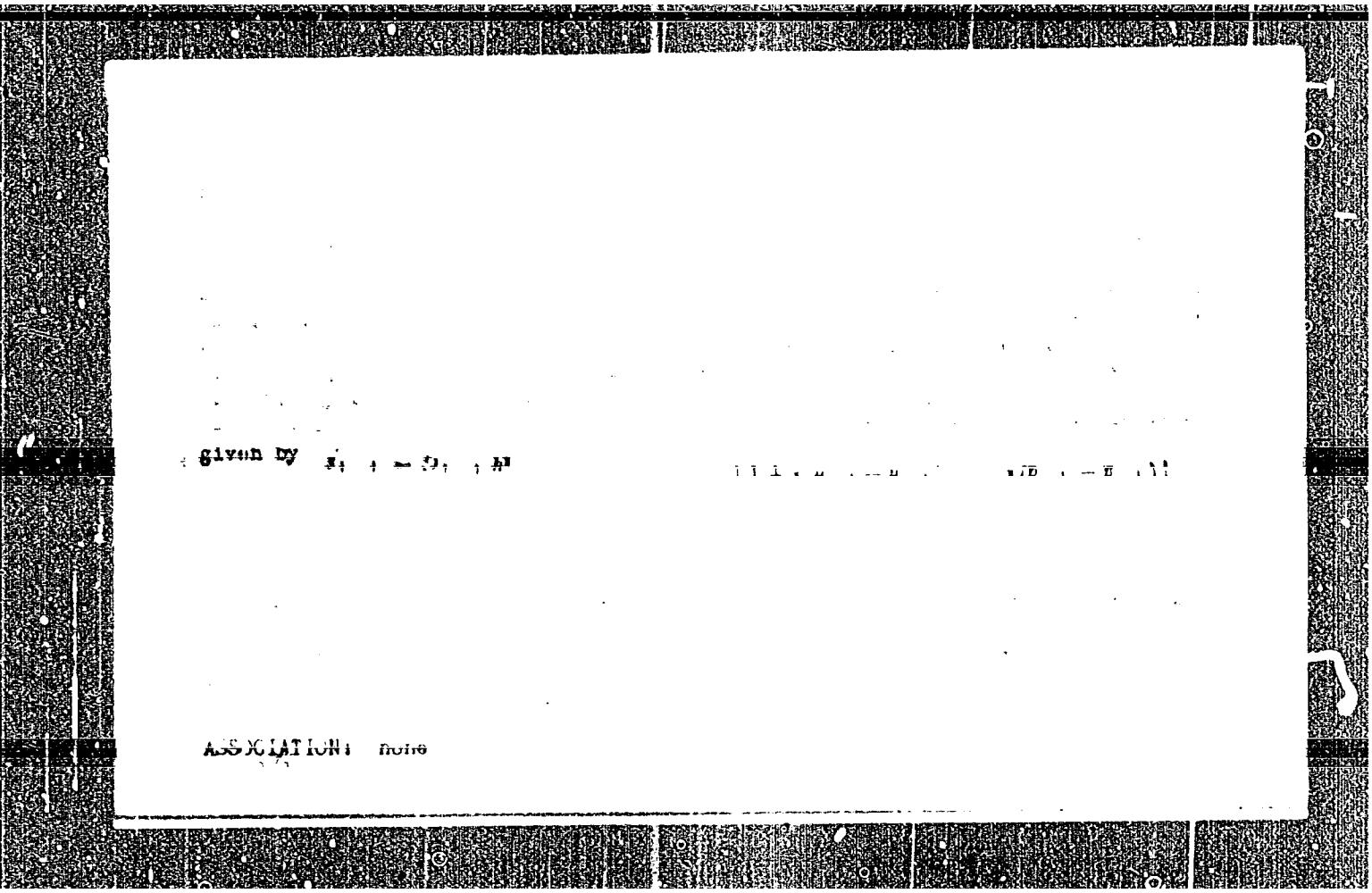
BALAKIN, V.B. (Moskva)

Stability of "oblique" difference systems. Zhur.vych.mat.i mat. fiz. 3 no.2:381-385 Mr-Ap '63. (MIRA 16:4)
(Difference equations)

BALAXIN V.B.

Derivative steps according to the initial data on the discontinuity surface of the right side of a system. Zhur. vych. mat. i mat. fiz. 4 no.6:1102-1106 N-D '64. (MIRA 18:2)





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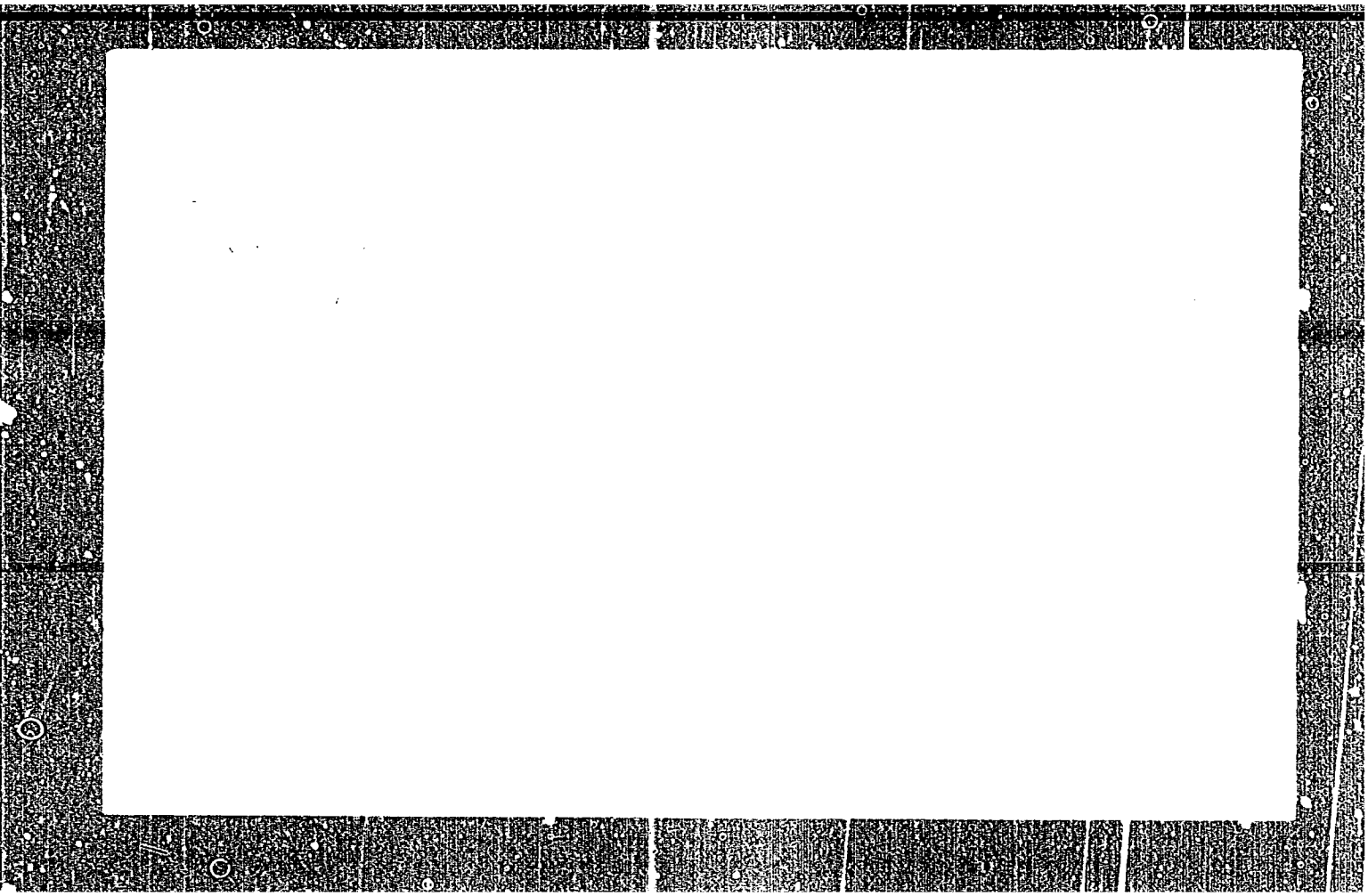
ASSOCIATION: none



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R000103

PHASE I FOREIGN ISLAND BIBLIOGRAPHICAL REPORT AID 489-I

BOOK Call No.: AF6411156

Authors: DAVILOV, F. A., GLYCBERG, A. Z., BALAKIN, V. G.

Full Title: HOT ROLLING OF STEEL PIPES

Transliterated Title: Proizvodstvo stal'nykh trub goryachey prokatkoy

PUBLISHING DATA

Originating Agency: None

Publishing House: State Scientific and Technical Publishing House of Literature on Ferrous and Nonferrous Metallurgy (Metallurgizdat)

Date: 1954 No. pp.: 615 No. of copies: 3,500

Editorial Staff

Engineers Osadchiy, Ya. P., Kostin, V. I., Oslov, N. L., Kalashnikov, I. P. and Vazhenin, L. I., Technician

PURPOSE: The book is intended for engineers and technicians in metallurgical plants and also for students studying pipe manufacture.

TEXT DATA

Coverage: This work describes in detail the technological processes of seamless-pipe manufacturing from carbon, alloy, and high-alloy steels, by means of every modern method of hot rolling. Basic problems of the theory of pipe rolling are examined. The authors discuss at length the methods of compiling the tr ing of rolling operations, the adjusting of mills, and the groove designing of rolls. Special attention is given to automatic mills. A separate chapter

1/2

Proizvodstvo stal'nykh trub goryachey prokatkoy AID 483 - I

describes the manufacturing technique of some special types of pipes. The book deals also with problems of the efficiency of the equipment, taking into consideration recent Soviet achievements in this field. The book contains illustrations, tables and diagrams.

No. of References: Total 40, 45 Russian (1932-1951)

Facilities: Prof. P. T. Yemel'yanenko, Corr, Mem., Acad of Sci., USSR; Prof. A. I. Tselikov, Corr. Mem., Acad of Sci., USSR; Prof. V. S. Smirnov, Doc. of Tech. Sci.; Kand. of Tech. Sci. I. A. Fomichev, S. I. Borisov, A. A. Shevchenko, Yu. M. Matveyev, P. K. Teterin, O. A. Plyatskovskiy and V. V. Shveykin. (Theory of rolling). Industrial Engineers M. I. Matveyev, I. V. Dubrovskiy, A. M. Zvyagintsev, N. M.Kolpovskiy, Z. A. Sominskiy; Skilled workmen and foremen I. S. Kutsenko, S. O. Koptelyy, V. A. Vanzha, N. A. Zhukov, I. I. Chursinov.

/2/2

BALAKIN, V. G.

PHASE I BOOK EXPLOITATION SOV/6019

Danilov, Fedor Aleksandrovich, Anatoliy Zinov'yevich Gleyberg, and Valeriy Georgiyevich Balakin.

Goryachaya prokatka trub (Hot Rolling of Tubes) 2d ed., rev. and enl. Moscow, Metallurgizdat, 1962. 591 p. 3400 copies printed

Ed.: Yu. F. Shevakin; Ed. of Publishing House: Yu. V. Vladimirov; Tech. Ed.: A. I. Karasev.

PURPOSE: This book is intended for engineering personnel in the tube manufacturing industry, and designers working on the development of the technology and equipment for the hot rolling of tubes. It may also be useful to students specializing in tube rolling at schools of higher and secondary education.

COVERAGE: The book reviews the manufacturing processes and equipment most widely used for the hot rolling of seamless tubes. Basic problems of the tube-rolling theory are reviewed, and the procedures for working out rolling charts, setting up mills,

Card 1/

and designing rolling tools are discussed in detail. Information on the manufacturing of tube-rolling tools is given. Problems connected with the automation of equipment and the output of mills are reviewed. The book also presents an analysis of experience gained in the hot rolling of seamless tubes in Soviet and non-Soviet countries during the last few years. No personalities are mentioned. There are 74 references, all Soviet.

TABLE OF CONTENTS:

BALAKIN, V.I., inzh.

Some special features of the operating process of a motor with air-chamber mixing and supercharging. Energomashinostroenie 6 no.6:42-44 Je '60. (MIRA 13:8)
(Diesel engines--Superchargers)

GAL'PEROVICH, Leonid Grigor'yevich; DAVYDOV, G.A., kand. tekhn. nauk, retsenzent; BALAKIN, V.I., inzh., retsenzent; KAMKIN, S.V., nauchnyy red.; NIKITINA, R.D., red.; KOROVENKO, Yu.N., tekhn. red.

[Fuel injection systems for marine diesel engines; design] Sistemy vypuska topliva sudovykh dizelei; proektirovanie, konstruktsii. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1961. 221 p. (MIRA 14:12)

(Fuel pumps) (Marine diesel engines—Fuel systems)

BALAKIN, V.I.

Standardizing the fuel equipment of high and medium power diesel engines. Standartizatsiia 25 no.3:17-20 Mr '61. (MIRA 14:3)
(Diesel engines--Standards)

BALAKIN, V. I., CAND TECH SCI, "~~INVESTIGATION~~ Study of ~~THE PARTI-CULARS~~ peculiarities OF THE OPERATING PROCESS OF A FOUR-CYCLE ENGINE EQUIPPED WITH AIR CHAMBER CARBURETION during ~~AND~~ SUPERCHARGING." LENINGRAD, 1961. (LENINGRAD INST OF WATER TRANSPORT). (KL-DV, 11-61, 217).

ACCESSION NR: AP4020101 S/0125/64/000/003/0034/0036

AUTHOR: Khrenov, K. K. (Corresponding member); Balakin, V. L. (Engineer)

TITLE: Dilatometric investigation of aluminum, copper, and titanium butt joints made by cold welding

SOURCE: Avtomaticheskaya svarka, no. 3, 1964, 34-36

TOPIC TAGS: welding, cold welding, aluminum cold welding, copper cold welding, titanium cold welding, butt cold welding

ABSTRACT: An experimental investigation of linear-expansion coefficients of Al and Cu 10-mm^2 electric-conductor wires and 3-mm-diameter VT1 commercially pure titanium wire is reported. Cold welding was performed with 1, 2, and 3 upsettings with a stroke equal to the wire diameter. Dilatometric curves were obtained on a differential optical dilatometer, and the linear-expansion coefficients were determined from the curves for 100-400C (Al) and 100-500C (Cu

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ACCESSION NR: AP4020101

and Ti) ranges; at 400C, the coefficient for Al was determined as 30×10^{-6} per 1C. It was found that, within the recrystallization temperature range, the linear-expansion coefficient of wire joints is somewhat lower than that of solid wire. The linear expansion of cold-welded joints was found to be dependent on the processes transpiring in the deformed metal during subsequent heating. It is also inferred that a variation of interatomic bonds in cold-welded joints does not necessarily take place. Orig. art. has: 2 figures.

ASSOCIATION: Institut elektrosvarki im. Ye. O. Patona AN UkrSSR (Institute of Electric Welding, AN UkrSSR); Kiyevskiy institut grazhdanskogo vozdushnogo flota (Kiev Institute of Civil Aviation)

SUBMITTED: 03Jul63 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: ML NO REF SOV: 006 OTHER: 001

Card 2/2

ACCESSION NR: AP4009284 S/0125/64/000/001/0039/0042

AUTHOR: Balakin, V. I.; Gurskiy, P. I.

TITLE: Investigation of the strength of aluminum cold-welded joints

SOURCE: Avtomaticheskaya svarka, no. 1, 1964, 39-42

TOPIC TAGS: cold welding, aluminum cold welding, cold welded joint, aluminum cold welded joint, aluminum cold welded joint strength

ABSTRACT: An experimental study of the strength of cold spot welds of 1-, 1.5-, 2-, and 3-mm-thick AD1M aluminum made by a punch with a projecting working part of 2-, 3-, 5-, and 8-mm diameter is reported. It was found that: (1) The strength of single-spot welds is proportional to the perimeter of the weld spot; the joint breaks along the perimeter if the shear area is smaller than the weld-spot area; (2) With deformations of 80% or more, the spot strength is largely determined by the strength of the peripheral zone; (3) The weld strength

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ACCESSION NR: AP4009284

is determined by the strength of the metal workhardened during the cold welding. "The work was directed by Academician UkrSSR K. K. Khrenov." Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Kiyevskiy institut GVF (Kiev Institute of Civil Aviation); Institut elektrosvarki im. Ye. O. Patona AN UkrSSR (Institute of Electric Welding, AN UkrSSR)

SUBMITTED: 03Jul63 DATE ACQ: 07Feb64 ENCL: 00

SUB CODE: ML NO REF SOV: 004 OTHER: 002

Card 2/2

KHRENOV, K.K. [Khrienov, K.K.], akademik; BALAKIN, V.I.

Role of texturation in the cold welding of metals. Dop. AN URSR no.8:1075-1076 '64. (MIRA 17:8)

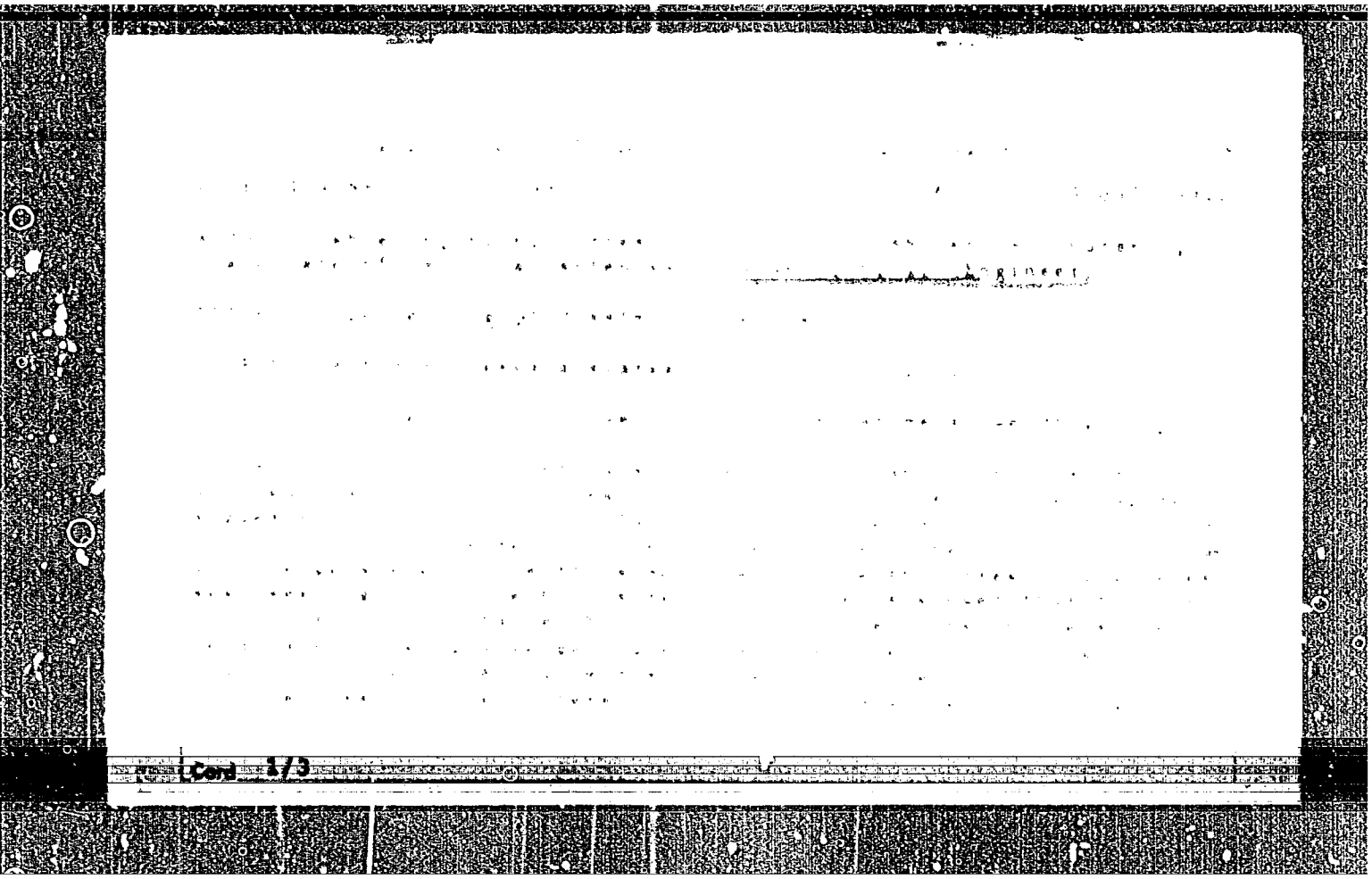
1. Institut elektrosvarki AN UkrSSR. 2. AN UkrSSR (for Khrenov).

BALAKIN, V.I., kand. tekhn. nauk; KOLLEROV, L.K., kand. tekhn. nauk

Operating life and reliability of diesel engines should be increased. Energomashinostroenie 10 no.12:8-10 D '64.
(MIRA 18:2)

FAYNLEYB, B.N.; GOLUBKOV, I.G.; KOCHEV, L.A.; BALAKIN, V.I., kand. tekhn. nauk, retsenzent; TUKHSHNAYD, A.M., inzh. red.

[Methods for testing and investigating the fuel systems of motor-vehicle and tractor diesel engines] Metody ispytanii i issledovanii toplivnoi apparatury avtotraktornykh dizelei. Moskva, Mashinostroenie, 1965. 174 p. (MIRA 18:9)



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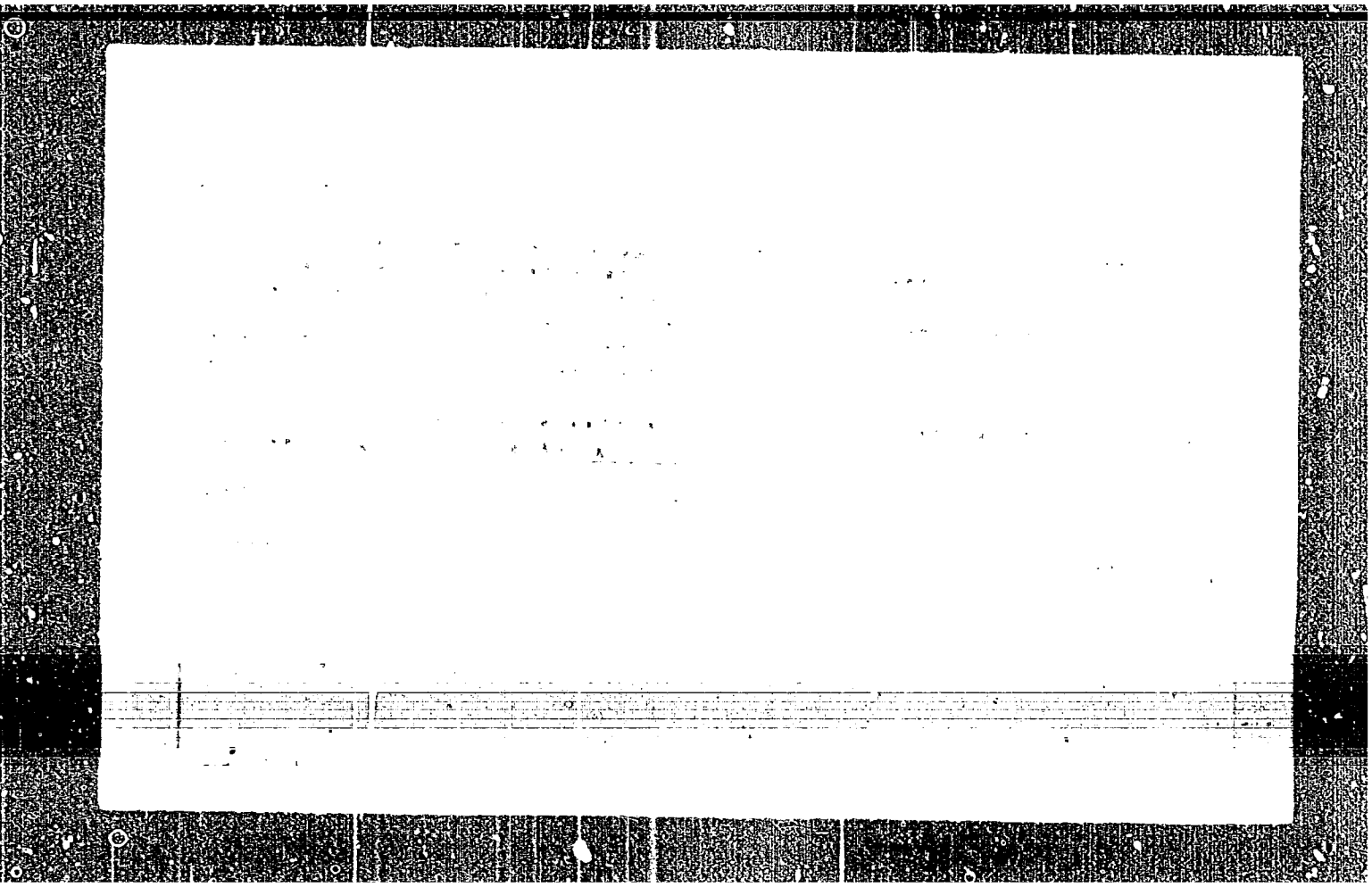

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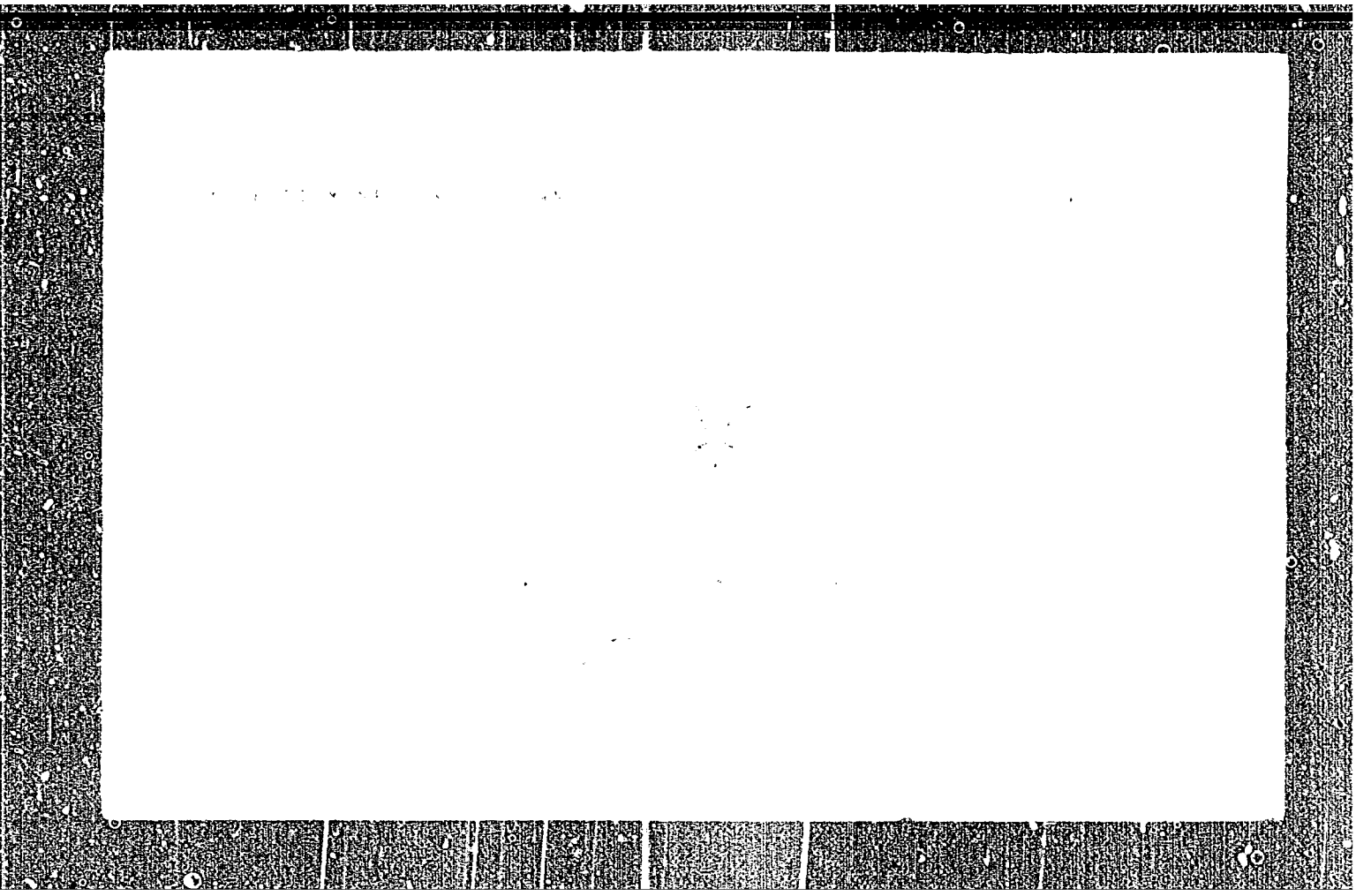

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R000103

BALAKIN, V.I., red.; IVANCHENKO, N.N., red.; KOLLEROV, L.K., red.; LEVIN, M.I., red.; NIKITIN, M.D., red.

[Internal combustion engines; collection of papers dedicated to the memory of Professor Liudvig Karlovich Martens, Doctor of Technology] Dvigateli vnutrennego sgoraniia; sbornik rabot posvinshchennyi pamiati doktora tekhnicheskikh nauk, professora Liudviga Karlovicha Martensa. Moskva, Mashinostroenie, 1965. 454 p. (MIRA 18:4)

L 2196-66 EWT(m)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWA(h)

ACC NR: AP6007916 SOURCE CODE: UR/0125/66/000/002/0007/0009

AUTHOR: Balakin, V. I.; Khrenov, K. K.

ORG: Institute of Electric Welding im. Ye. O. Paton, AN UkrSSR (Institut elektrosvarki AN UkrSSR)

TITLE: The role of the vacuum in cold welding

SOURCE: Avtomaticheskaya svarka, no. 2, 1966, 7-9

TOPIC TAGS: cold welding, vacuum welding, gas adsorption, molecule

ABSTRACT: A new theory is offered by the authors, namely, that the principal difficulties in cold welding (extensive deformations, high unit pressures greatly exceeding the ultimate strength of the metal and considerable expenditure of energy) stem from the film of adsorbed gases at the metal surface. The old theory claiming that these difficulties are due to surface contamination by oxide and grease films is shown to be unfounded, since the removal of these films is a comparatively easy operation that does not make cold welding any easier thereby. Thus the conclusion is that the culprit is precisely the film of adsorbed gases which is normally ignored. This film is extremely difficult to eliminate, because it is almost instantaneously restored in air

Card 1/2 UDC: 621.791.1:533.5

L 21968-66

ACC NR: AF6007916

or in any other gaseous atmosphere. Besides, recent experiments (cf. N. L. Colego. Avtomaticheskaya svarka, no. 3, 1965) have demonstrated that metals with a surface free of an adsorbed film of gases, when present in a high vacuum of 10^{-9}-10^{-10} mm Hg, get bonded together sufficiently strongly at a pressure of only 1 g/mm^2 as compared with the tremendous pressures required in cold welding under normal conditions. The explanation for this phenomenon is that the surface atoms of metal have unsaturated outside bonds. A layer in which operate considerable forces of attraction, capturing any molecule, forms at the surface. Thus there primarily forms an extremely strong monomolecular layer in which the molecules of gas are pressed against the metal under a pressure of hundreds or even thousands of atmospheres; this layer forms almost instantaneously within 10^{-8}-10^{-9} seconds after any cleaning of the surface and it simply cannot be eliminated by any method of cleaning metals in air. Cleaning in a vacuum of not less than 10^{-7}-10^{-9} mm Hg, on the other hand, is effective and it is definitely worthwhile considering that then the quality of cold welding can be greatly improved and the required deformations and unit pressures drastically reduced. This can be accomplished on an industrial scale and hence the necessary if intricate apparatus should begin to be developed. Cold welding in the vacuum of outer space is another eventual possibility.

SUB CODE: 13, 20/ SUBM DATE: 13May65/ ORIG REF: 001/

Vacuum diffusion bonding

Card 2/2 VLR

L 38724-66 EWT(m)/T DJ/WE
ACC NR: AP6014150 (A,N) SOURCE CODE: UR/0114/65/000/012/0001/0003

AUTHOR: Balakin, V. I. (Candidate of technical sciences); Kollerov, L. K. (Candidate of technical scinence)

69
60
B

ORG: None

TITLE: Improving the quality of diesels

SOURCE: Energomashinostroyeniye, no. 12, 1965, 1-3

TOPIC TAGS: diesel engine, diesel fuel, quality control, automation, automation equipment, ~~cavitation,~~ component life expectancy, fuel consumption

ABSTRACT: The authors discuss the necessity for systematic improvement in production quality of diesel units. Diesels are the most important source of power in the Soviet Union since they produce more than 50% of the entire power output. The problems of increasing the quality and production of diesels are discussed: increasing the service life of diesels by a factor of 2-3 before overhauling and major repairs; improving the quality of engine assembly apparatus, electric units and means of automation; organizing the production of steel and other materials with higher quality indices; improving parts production; increasing the number of machine tools in use and constructing new specialized machine tools and other technical equipment. The problems associated with improving the quality of diesels were discussed at the Conference on

Card 1/2 UDC: 621.436(047.1)

L 38724-66
ACC NR: AP6014150

Diesel Building held in Leningrad May, 1965. Diesel plant workers, scientific research institutes, departments of internal combustion engines of universities and government committees, ministries and others were present. The Conference listened to the report of the Central Scientific Research Diesel Institute on the results of the plan for 1964 and measures for its fulfillment in 1965, and the plan for 1966 including the technical level of domestic diesels. Chief engineers of diesel building plants, L. V. Markin, V. M. Nikolayev, N. I. Suvorov, Ye. A. Koshkin and other, spoke on the subject. It was pointed out that various diesel building plants and scientific research institutes are doing work on producing up-to-date diesels with improved gas-turbine supercharging and automatic control. Such topics as reduction of fuel consumption and oil were also considered. 7000 diesels with improved motor capacity were produced by diesel plants in 1964 alone. This shows an increase of 27% compared to 1963. Steps were taken to establish a special branch for specialization, cooperation, technical economic study, standardization and other functions. Patentability must be taken into consideration in the production of new diesels. This necessity has been brought about by increased international trade. All requirements for export production should also fall under this topic.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

Card 2/2

BALAKIN, V. B.

Method of numerical calculation of discontinuous solutions to gas dynamics equations. Inzh.-fiz. zhur. 6 no.1:105-108 Ja '63. (MIRA 16:1)

(Differential equations--Numerical solutions)
(Gas dynamics)

KHRENOV, K.K.; BALAKIN, V.I.

Dilatometry of cold welded butt joints in aluminum, copper, and titanium. Avtom. svar. 17 no.3:34-36 Mr '64. (MIRA 17:11)

1. Institut elektrosvarki im. Ye.O. Patona AN UkrSSR (for Khrenov).
2. Kiyevskiy institut Grashdanskogo vozdushnogo flota (for Balakin).

BALAKIN, V.I.

Investigating certain problems in the physics of the cold welding of metals. Avtom. svar. 17 no.5:28-32 My '64. (MIRA 17:11)

1. Kiyevskiy institut Grazhdanskogo vozdushnogo flota.

BALAKIN, V.M.

Vertical milling heads. Stan.i instr. 29 no.6:42 Je '58.
(MIRA 11:7)

(Milling machines--Attachments)

KVAPIL', Aleksey Ivanovich, kand.sel'skokhoz.nauk; SEREBRYAKOV, Kapiton Mikhaylovich; BALAKIN, V.M., red.; LOGINOVA, Ye.I., tekhn.red.

[Organization of rabbit farms] Organizatsiia krolikovedcheskoi fermy. Moskva, Izd-vo M-va sel'.khoz.RSFSR, 1959. 39 p. (MIRA 14:2)

(Rabbits)

TITOVA, Mariya Ivanovna; BALAKIN, V.M., red.; LOGINOVA, Ye.I., tekhn. red.

[Rabbit breeder's calendar] Kalendar' krolikovoda. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1959. 40 p. (MIRA 14:9)
(Rabbit breeding)

VOLKOV, V.A.; FEDOROVSKIY, N.P., kand.biolog.nauk; PENIONZHKEVICH, E.E., prof., doktor biolog.nauk; MASLIYEV, I.T., kand.sel'skokhoz.nauk; KRIKUN, A.A., kand.sel'skokhoz.nauk; PATRIK, I.A., kand.sel'skokhoz. nauk; MALINOVSKAYA, A.S., kand.biolog.nauk; DAKHNOVSKIY, N.V., kand.biolog.nauk; ORLOV, M.V., kand.sel'skokhoz.nauk; REDIKH, V.K., kand.sel'skokhoz.nauk; GOFMAN, M.B., zootekhnik; GRIGOR'YEV, G.K., starshiy nauchnyy sotrudnik; GORIZONTOVA, Ye.A., starshiy nauchnyy sotrudnik; PROKTISTOV, P.I., kand.veter.nauk; KOTEL'NIKOV, G.A., kand.veterin.nauk; SHKUDOVA, R.I., red.; BALAKIN, V.M., red.; GRADUSOV, Yu.N., red.; SOKOLOVA, G.S., red.; SAYTANIDI, L.D., tekhn.red.

[Duck raising] Utkovodstvo. Izd-vo M-va sel'khoz. R.S.F.S.R., 1959. 284 p. (MIRA 13:12)

1. Nachal'nik Glavnogo upravleniya ptitsevodstva Ministerstva sel'skogo khozyaystva RSFSR (for Volkov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut ptitsepromyshlennosti (for Grigor'yev). 3. TSentral'nyy nauchno-issledovatel'skiy institut ptitseperera-batyvayushchey promyshlennosti (for Gorizontova).
(Ducks)

VOGINOV, Semen Mefod'yevich; BALAKIN, V.M., red.; SAYTANIDI, L.D., tekhn.red.

[Automatic watering of cattle without the use of metal pipes] Ustroistvo avtomaticheskogo poeniia dlia skota bez primeneniia metallicheskikh trub. Moskva, Izd-vo M-va sel'.khoz.RSFSR, 1960. 21 p. (MIRA 14:1)
(Cattle--Watering)

KOROLEV, A.F.; BALAKIN, V.M., red.; ULIN, I.I., red.; SAYTANIDI, L.D., tekhn. red.

[New methods in raising swine] Novye priemy soderzhaniia svinei; sbornik statei. Moskva, Izd-vo M-va sel'.khoz.RSFSR, 1960. 179 p. (MIRA 14:12)

(Swine breeding)

OSTROVSKIY, Nikolay Ivanovich, doktor biol. nauk; BALAKIN, V.M., red.; LEVINA, L.G., tekhn. red.

[Preventing the poisoning of bee by chemicals] Preduprezhdenie otravleniia pchel khimicheskimi veshchestvami. Moskva, Izd-vo M-va sel'.khoz.RSFSR, 1961. 38 p. (MIRA 15:7)

(Bees, Effect of spraying and dusting on)

PETROCHENKO, V.I.; KOTEL'NIKOV, G.A.; BALAKIN, V.M., red.; LEVINA, L.G., tekhn. red.

[Using reservoirs for poultry raising and the prevention of helminthiases]Ispol'zovanie vodoemov dlia vyrashchivaniia ptitsy i profilaktika gel'mintozov. Moskva, Izd-vo M-va sel'-khoz.RSFSR, 1962. 137 p. (MIRA 15:9)
(Parasites—Ducks) (Parasites—Geese)

BALAKIN, V.M., red.; ULIN, I.I., red.; KUPTSOVA, Z.V., red.; SAYTANIDI, L.D., tekhn. red.

[For high production in the use of land] Za vysokoproizvoditel'noe ispol'zovanie zemli; sbornik statei. Moskva, MSKh RSFSR, 1962. 68 p. (MIRA 16:5)

1. Moscow. Vystavka dostizheniy narodnogo khozyaystva SSSR. Pavil'on "Zemledeliye."

(Agriculture)

ZHURAVLEV, Yevgeniy Mikhaylovich; BALAKIN, V.M., red.; TRUKHINA, O.N., tekhn. red.

[Manual on the zootechnical analysis of feeds] Rukovodstvo po zootekhnicheskomu analizu kormov. Moskva, Sel'khozizdat, 1963. 294 p. (MIRA 16:10)

(Feeds—Analysis)

GRUDEV, Dmitriy Ivanovich; BALAKIN, V.M., red.; SHESHNEVA, E.A., tekhn. red.

[Organization of breeding work in swine raising] Organizatsiia plemennoi raboty v svinovodstve. Moskva, Izd-vo M-va sel'-khoz.RSFSR, 1962. 137 p. (MIRA 17:1)

DENISOV, A.D.; BALAKIN, V.M., red.; DMITRIYEV, I.N., red.

[Loose housing of cattle] Besprivlaznoe soderzhanie skota; sbornik statei. Moskva, Sel'khozizdat, 1963. 389 p.
(MIRA 17:6)

ORLOV, V.I.; ROKSHTEYN, Ye.I.; BALAKIN, V.N., red.

[Breeding work and artificial insemination of farm animals] Plemennoe delo i iskusstvennoe osemenenie sel'skokhoziaistvennykh zhivotnykh; sbornik statei. Moskva, Izd-vo "Kolos," 1964. 205 p. (MIRA 17:8)

SYSOYEV, Aleksandr Anufriyevich, prof.; BALAKIN, V.M., red.

[Theory and practice of the reproduction of cattle] Teoriia i praktika vosproizvodstva skota. Moskva, Kolos, 1965. 255 p. (MIRA 18:4)

SINESHCHEKOV, Aleksey Davydovich, prof.; BALAKIN, V.M., red.

[Biology of the feeding of farm animals; biological principles of the efficient use of feeds] Biologiia pitaniia sel'skokhoziaistvennykh zhivotnykh; biologicheskie osnovy ratsional'nogo ispol'zovaniia kormov. Moskva, Kolos, 1965. 398 p. (MIRA 18:7)

SAKHAROV, G.S., kand.tekhn.nauk; MANUYLOV, V.F., inzh.; BALAKIN, V.P., inzh.

Effect of surface conditions on the seizing process during cladding. Trudy MATI no.62:157-159 '65.

(MIRA 18:10)

ACC NR: AT5027926 SOURCE CODE: UR/2536/65/000/062/0157/0159

AUTHOR: Sakharov, G. S. (Candidate of technical sciences); Manylov, V. F. (Engineer); Balakin, V. F. (Engineer)

ORG: Moscow Aviation Technology Institute (Moskovskiy aviatsionnyy tekhnologicheskiy institut)

TITLE: Effect of the state of metal surface on interlocking during cladding

SOURCE: Moscow. Aviatsionnyy tekhnologicheskiy institut. Trudy, no. 62, 1965. Obrabotka davleniyem legkikh splavov (Pressure working of light alloys), 157-159

TOPIC TAGS: metal cladding, metal bonding, bimetal, metal surfacing

ABSTRACT: The article deals with the effect of the area of actual contact on the strength of cohesion between base metal (D1 alloy) and cladding metal (A1) during rolling of specimens with surfaces polished in a planing machine as well as by means of a metal brush, a file or a rough grinder. The actual surface of contact was estimated by the contact-spot method (V. I. Vill'. Svarka metallov treniyem, Mashgiz, 1959): to determine the overall surface area of friction and the pattern of distribution of contact spots on the contacting surfaces, the specimens are placed on a tracing slab coated with a thin layer of dye. During circular movements of the specimen, performed under a slight pressure, the surface subject to interlocking acquires imprints of dye indicating the number of contact spots and the pattern of their distribution. Findings:

Card 1/5 UDC: 669.716:621.97.07

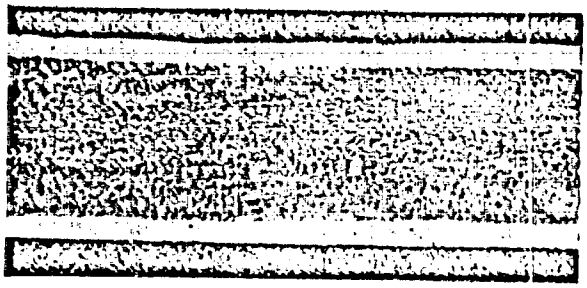

Fig. 1. Macrosection of clad specimen

L 25634-65
ACC NR: AT5027926

Fig. 2. Disruption of bonding between base metal and cladding metal following bending tests. The surface of this specimen was planed prior to cladding.

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L 15634-66
ACC NR: AT5027926

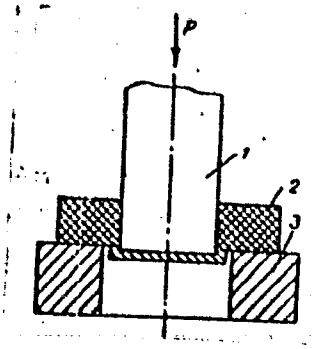

Fig. 3. Testing of specimens for separation of cladding layer from base material

1 - punch; 2 - specimen tested; 3 - ring

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L 15634-66
ACC NR: AT5027926

the number of contact spots differed according to the treatment of surface: on a planed surface it was 42; on a surface cleaned with metal brush, 86; on a filed surface, 166; and on a ground surface, ∞ (i.e. the entire surface became covered with a layer of dye). Subsequently these specimens were subjected to hot rolling with 25% deformation and the resulting composite (clad)sheets were metallographically examined; the examination showed a satisfactory bonding of cladding material to the base material regardless of the method of surface treatment (Fig. 1). For a qualitative evaluation of the firmness of bonding, the specimens were subjected to repeated bending: loosening of the cladding layer was observed only for the specimens whose surface was planed (Fig. 2). Since the number of contact spots for this furface was the lowest (42), the contact-spot method is indeed a workable method for determining bonding strength. Quantitative evaluation of bonding strength (Fig. 3) showed that for the specimens with planed surface the bonding strength was 8.74 kg/mm^2, against 8.92 kg/mm^2 for specimens with surface cleaned by means of a metal brush, 9.21 kg/mm^2 for specimens with filed surface, and 9.48 kg/mm.^{2} for specimens with ground surface. Thus the contact-spot method is a good way of selecting the optimal technique of surface treatment in the production of bimetals and, moreover, can be used for the quality control of the surface of blanks prior to cladding. Orig. art. has: 4 figures.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 000

TS

Card 5/5

L 12737-63 RDS/EWT(d)/FCC(w) AFFTC IJP(C)

S/208/63/003/002/012/014

54
51

AUTHOR: Balakin, V. S. (Moscow)

TITLE: The stability of "oblique" schemes of differences

PERIODICAL: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 3, no. 2, 1963, 361-366

TEXT: The stability of schemes of differences is studied usually on linear model problems with constant coefficients which are in a definite sense similar to the original ones. The stability [illegible] by the author can be viewed as [illegible] stability is handled by means of

$$\sum_k a_k u^{n+1}_{m+\delta+k} = \sum_l b_l u^n_{m+l} \qquad (1)$$

where a_k, b_l - matrices of the coefficients, u^n_m - vector solution, m - spacial index (a vector), $\delta = \delta(n)$ - displacement index of the n-th layer. The indexing

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S/208/63/003/002/012/014

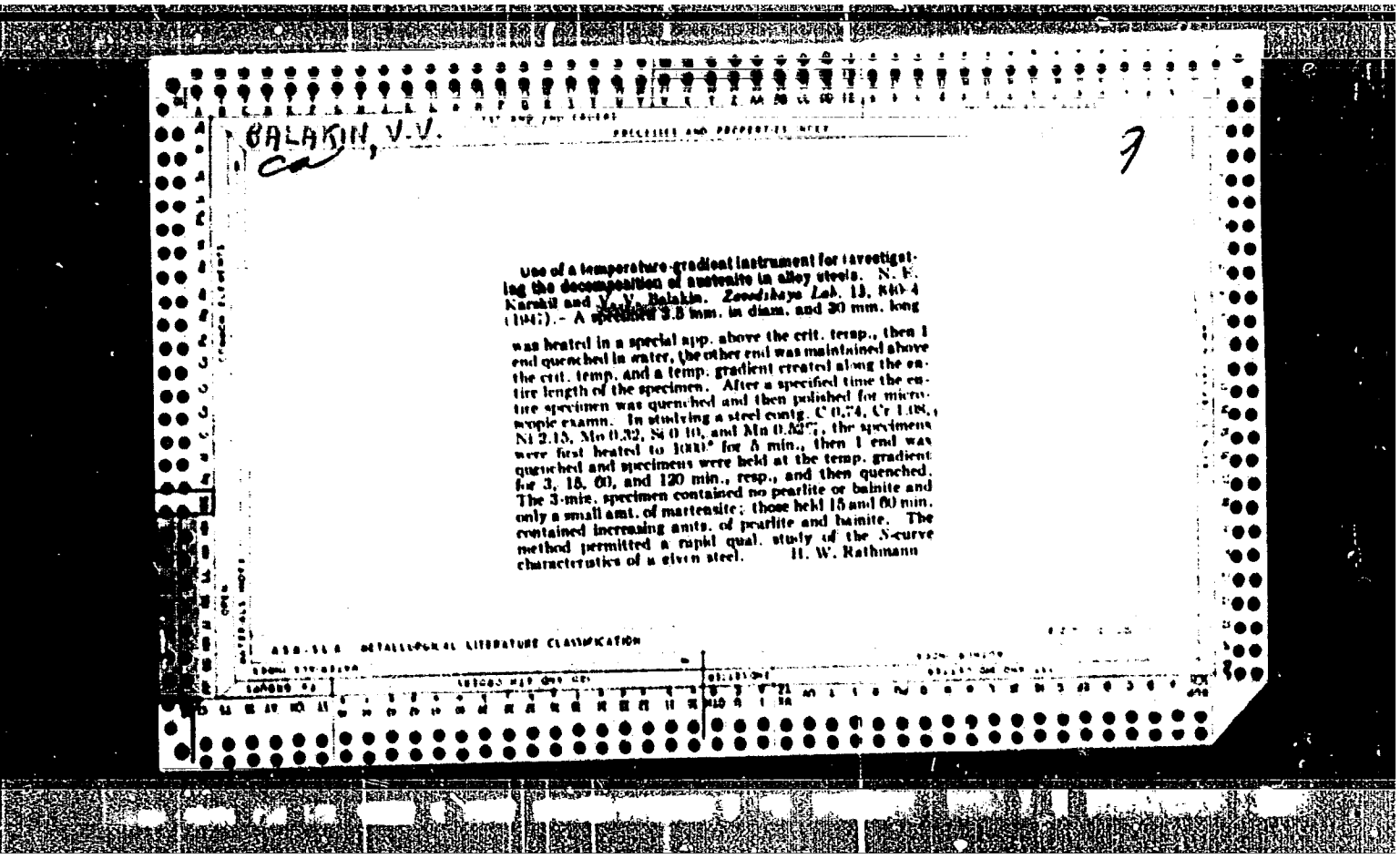
3

The stability of ....

in (1) is understood to be with respect to a rectangular lattice with the same x and t steps as in the oblique system. After discussing the Neumann stability condition for various cases, the author notes that the spacial scheme of the method of characteristics as proposed by R. Sauer (Ref. 3: Z. angew. Math. und Mech., 1950, 30, no. 11/12) is not stable. The author thanks V. V. Rusanov for the guidance and K. A. Semendyayev and V. S. Ryaben'ko for valuable advice. There are 2 figures.

SUBMITTED: June 9, 1962.

Card 2/2



BALAKIN, V.V.

7

Use of a temperature-gradient instrument for investigating the decomposition of austenite in alloy steels. N. F. Karnaukh and V. V. Balakin. *Zavodskaya Lab.* 13, 840-4 (1947).- A specimen 3.8 mm. in diam. and 30 mm. long was heated in a special app. above the crit. temp., then 1 end quenched in water, the other end was maintained above the crit. temp. and a temp. gradient created along the entire length of the specimen. After a specified time the entire specimen was quenched and then polished for microscopic examn. In studying a steel contg. C 0.74, Cr 1.08, Ni 2.15, Mo 0.32, Si 0.10, and Mn 0.85%, the specimens were first heated to 1000° for 5 min., then 1 end was quenched and specimens were held at the temp. gradient for 3, 15, 60, and 120 min., resp., and then quenched. The 3-min. specimen contained no pearlite or bainite and only a small amt. of martensite; those held 15 and 60 min. contained increasing amts. of pearlite and bainite. The method permitted a rapid qual. study of the *S*-curve characteristics of a given steel. H. W. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BALAKIN, V.Ye.

Dynamometer testing stand for the general testing of spindles.
Izv.vys.ucheb.zav.; tekh.tekst.prom. no.1:169-170 '62.
(MIRA 15:3)

1. Moskovskiy tekstil'nyy institut.
(Spinning machinery--Testing)

BALAKIN, Ye.D.; MUKHANOV, G.V.; MURVANIDZE, D.S., red.; KHRAMYKH, N.M., red.; BRODSKIY, V.S., tekhn. red.

[Topics for inventors and efficiency promoters in the shoe industry]Temnik dlia izobretatelei i ratsionalizatorov obuvnoi promyshlennosti. Moskva, Biuro tekhn. informatsii legkoi promyshl., 1959. 95 p. (MIRA 15:11)

1. Russia (1923- U.S.S.R.)Gosudarstvennyy nauchno-tekhnicheskiy komitet.
(Shoe manufacture--Technological innovations)

BALAKIN, Ye.D.

Production quality is the main object of the leather, shoe and fur industry. Kozh.-obuv. prom. 7 no.5:1-4 My '65. (MIRA 18:8)

1. Zamestitel' nachal'nika Upravleniya kozhevenno-obuvnoy i mekhovoy promyshlennosti Gosudarstvennogo komiteta po legkoy promyshlennosti pri Gosplane SSSR.

KUDRYAVTSEV, V.N.; BALAKIN, Yu.P.; VAGHAMYAN, A.T.

Hydrogen absorption by steel during cathodic polarization in acid solutions. Zashch. met. 1 no.5:477-481 S-O '65. (MIRA 18:9)

1. Institut fizicheskoy khimii AN SSSR.

PALAKINA, G. F.

"The Derivation of Furfural From Cotton Husks by Aqueous Hydrolysis." Cand Tech Sci, Ural Forestry Engineering Inst, Sverdlovsk, 1953. (RZhKhim, No 23, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

S/028/61/000/011/004/004
D221/D301

AUTHORS: Balakina, I.A., and Borzdyka, A.M.

TITLE: Rods and strips of heat resisting steels

PERIODICAL: Standartizatsiya, no. 11, 1961, 34-37

TEXT: The Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (TSNIICHM) (Central Scientific Research Institute of Ferrous Metallurgy) developed a standard for rods and strips of heat resisting steel. It is based on ГОСТ (GOST) 5632-61 and other data, and covers pearlitic, martensitic, martensitic-ferritic and austenitic classes. The first class includes 12Х1МФ (12Kh1MF) and other steels containing 0.9 to 3.3% of chromium, 0.15 - 1.1% of molybdenum and vanadium, and 0.3-0.5% of tungsten. The martensitic class averages 4.4-12% chromium with additions of nickel, tungsten, molybdenum and vanadium, covering steels of mark Х5М (Kh5M) etc. The steels containing 5-15% of ferrite in their structure are separated into the martensitic-ferritic class, containing 11-13% chromium with other additions. The

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Rods and strips ...

majority of heat resisting steels belong to the austenitic class with 7-27% chromium and nickel each, as well as other additions. The norms of long service and creep form the most important characteristic of these high quality steels. The project of the standard also deals with the mechanical properties of metal at normal temperatures which are determined on specimens of thermally treated blanks. Some characteristics of certain marks of steel are modified in accordance with the technical conditions in force at present, or by the first draft of the project. Additional examination of rods on the demand of customers is envisaged by the new standard, although they are not provided by GOST. This covers hair cracks, presence of the alpha phase etc. The methods of investigating resistance to scale formation, grain sizes, tendency to inter-crystalline corrosion and non-metallic inclusions are covered by GOST 6130-52, 5639-51 and 1778-57. The standard allows a mutual agreement between makers and consumers of steel for the above, owing to lack of unified norms of verification. The existing standards will be in force as far as forms, sizes and allowances for hot rolled and forged rods as well as strips are concerned. For dimensions exceeding 200 mm,

Rods and strips ...

the project envisages mutual agreement of steel producers and users. The depth of grinding-off the defects is similar to the standard for stainless and acid resisting rods. For sizes of 141-200 mm it corresponds to GOST 5949-61. There are 6 figures.

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BALAKINA, I.A.; BOCHKAREVA, A.I.; GORZHEVSKAYA, A.V.; KAPLAN, A.S.; SMOLYARENKO, D.A., kand. tekhn.nauk; TERENT'YEV, Ye.A.; SOTS, G.A.; TREMBITSKIY, Ya.V.; ULINSKAYA, Ye.I.; KHUTORSKAYA, Ye.S., red. izd-va; KLEYNMAN, M.R., tekhn. red.

[Technical specifications in effect on products of ferrous metallurgy; list as of October 1, 1961] Deistvuiushchie tekhnicheskie usloviia na produktsiiu chernoi metallurgii; perechen' po sostoianiiu na 1 oktiabria 1961 g. Moskva, Metallurgizdat, 1962. 141 p. (MIRA 15:5)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Iron industry--Tables and ready-reckoners)
(Steel industry--Tables and ready-reckoners)

S/028/62/000/003/005/005
D221/D302

AUTHORS: Balakina, I.A., and Bochkareva, A.I.

TITLE: New technical conditions for manufacturing ferrous metallurgy

PERIODICAL: Standartizatsiya, no. 3, 1962, 57-59

TEXT: During the third quarter of 1961, 20 new marks of steel received the technical specifications from TsNIIChM and other scientific research organizations. UMTU (ChMTU) TsNIIChM 548-61, 549-61 and 550-61 cover the delivery of trial batches of hot rolled and forged rods, etc. in high alloy corrosion resistant steel ЭП (EP) 309, the chemical composition of which is indicated. The similar specifications 540-61 and 541-61 concern the thick high-strength stainless steel and welding wire. They are intended as replacements of chrome-nickel austenitic stainless steel and are delivered in both untreated and hardened condition. The norm 526-61

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New technical conditions for ...

specifies trial order of discs and cylinder forgings in the new chrome, nickel and niobium steel ЭП(EP) 302. The forgings are tested for intercrystalline corrosion, macrostructure and mechanical properties at both room and 500°C temperature. Specification 545-61 covers rods and forgings of high-stress chrome-nickel-molybdenum steel ЭИ(EI) 310, delivered in annealed condition. 554-61 concerns the chrome-tungsten-vanadium-molybdenum steel ЭП 311 (ЭИС-6) (EP311(VNS-6)) in rods, and treated. 534-61 is specified for sample rods in 17НМ(17 NM) steel, which represents an economy of nickel when compared to 16NM although it reveals higher strength after hardening. 537-61 concerns rods in 17Х Н2 (17KhN2) steel for drill heads. The supplement to specifications ChMTU 3024-56 covers the delivery of pipe skelp in steel 55ХФА(55KhFA), which has a greater carbon content than a similar 50KhFA steel. 559-61 covers forgings and blanks in the higher stress constructional steel 40Х3ФА (40Kh3FA) as a replacement of nickel steel. 527-61 extends to rolled sections in easily welded high strength low-alloyed steel 09Г2Т(М) (09G2T (M)) and 16ГТ(3Н) (16GT (3N)). 546-61 regulates the delivery of thick plates and profiles in 10Г2С(10G2S) steel, for structural purposes. Its chemical composition

New technical conditions for ...

is similar to 10Г2СД(10G2SD) with the exception of copper and silicon addition. 551-61 covers thick plates of 10G2S steel after thermal treatment. 538-61 concerns samples of 65Г(65G) and 60С2 (60S2) steels both round and die-forged for pre-stressed concrete structures. 560-61 was developed for ingots in 25ХСНВФА(25KhSNVFA) steel. 515-61 covers high temperature alloy strip of mark ЭИ894 (EI894). 521-61 specifies the delivery of hot rolled stainless sheets in steel 10Х16Н4БА(ЭП56) 10Kh16N4BA (EP56)). 524-61 deals with hot rolled thick corrosion resistant steel with chrome, nickel, manganese and nitrogen of mark ЭП222 (EP222), and chrome-nickel-niobium-nitrogen steel EP 223. 517-61 concerns the hot rolled rods of Р18Ш (P18Sh) steel. Forged discs in steel ЭИ961Ш(EI 961Sh) obtained by the electroslag method are covered by 553-61. Pipe skelp in EI878 steel is specified in 513-61, whereas trial batches in pipes of the same steel are governed by ЧМТУ (ChMTU) УКРНИТИ UKRNITI 254-61.

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L 36142-66 EWT(m)/EWP(w)/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/WB/EM/JT

ACC NR: AT6016768 (N) SOURCE CODE: UR/2776/65/000/042/0127/0132

AUTHOR: Aleksandrova, T. K.; Balakina, I. A.; Kanunnikova, A. M.

ORG: none

TITLE: New All-Union State Standard for hot-rolled corrosion-resistant laminated steel plate

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 42, 1965. Proizvodstvo bimetallov (Production of bimetals), 127-132

TOPIC TAGS: chromium steel, nickel steel, low alloy steel, bimetal, metal cladding, industrial condition / Kh18N10T steel, Kh18N9T steel, Kh17N13M2T steel, OKh13 steel, 16GS low alloy steel, 09G2S low alloy steel, 09G2 low alloy steel

ABSTRACT: Owing to the sharp expansion of the output of laminated stainless steel plate beginning with 1960, it became necessary to establish a special GOST (All-Union State Standard) for this plate. This new GOST (GOST 10885-64, issued in 1964) specifies the technical conditions and requirements for the fabrication of laminated steel plate and sheets 4 to 160 mm thick, with the cladding layer being represented by the

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L 36142-66

ACC NR: AT6016768

the Cr-Ni and Ni steels Kh18N10T, Kh18N9T, OKh13 and Kh17N13M2T as well as by nickel, and the base layer, by low-alloy steels 16GS, 09G2S, 09G2 and 10KhSND, along with simple carbon steels of the St. class. The new GOST also includes such innovations as the determination of the tenacity of the welding of the base and cladding layers; it is highly important to users that bimetal sheets behave like solid sheets and do not split during their cutting, stamping and other operations involved in constructing chemical and electronic apparatus from these steels: the shear strength of the cladding layer must be at least 15 kg/mm^2. The introduction of this new GOST will doubtless create the conditions for improving the quality and broadening the variety of the output of bimetals and offer a broader selection of laminated plate and sheets to users. Orig. art. has: 5 figures, 1 table.

SUB CODE: 13, 11, 05 / SUBM DATE: none/ ORIG REF: 002

Joining of Dissimilar Metals

Card 2/2

L 46047-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG/AT
ACC NR: AP6018640 (A) SOURCE CODE: UR/0422/66/000/005/0087/0087

AUTHOR: Arone, R. G.; Balakina, I. A.; Bochkareva, A. I.; Stetsenko, B. A.; Sokolovskiy, P. I.

ORG: none

TITLE: A standard for low-alloy structural steel

SOURCE: Standarty i kachestvo, no. 5, 1966, 87

TOPIC TAGS: construction material, structural steel, alloy steel, welding evaluation, mechanical property / 16GS steel, 09G2S steel, 10G2S1 steel

ABSTRACT: A series of innovations in low-alloy structural steels (GOST 5058-65) based on recent work done at the Central Scientific Research Institute for Ferrous Metallurgy is described. Nineteen new grades of high strength low-alloy steel containing small amounts of carbide and nitride forming elements (Ti, V, Zr, Nb) were developed. Higher quality and performance are claimed for the new materials and suitable applications are recommended. The steels were melted in standard Martens furnaces and oxygen-converted. While the majority are used in the hot-rolled condition, they may be heat-treated to yield strengths of 40-50 kg/cm^2 with a saving of 20-30% in material. The heat-treated steels possess lower brittle fracture tendencies and slight aging sensitivity. Phosphorus and sulfur contents of the steels were maintained within strict limits (below

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L 36949-66

ACC NR: AP6018640

0.035%) to prevent brittle impact behavior (sulfur) or intercrystalline carcking in welds (phosphorus). Impact properties at low temperatures were also improved, grade "a" maintaining good properties to -40°C and some grades to -70°C. Superior mechanical properties in thick sections are guaranteed: steels 16GS, 09G2S and 10G2S1 are produced in thicknesses ranging from 4 to 160 mm.

SUB CODE: 11/ SUBM DATE: none

Card 2/2

L 22408-66 EWT(d)/EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(l)/EWA(h)/EWC(m)-6

ACC NR: AP6009132 SOURCE CODE: UR/0028/65/000/009/0063/0063

IJP(c) JD/HW

AUTHOR: Balakina, I. I.; Bochkareva, A. I.; Gorzhevskaya, A. V. 42

ORG: none B

TITLE: Standard specifications for high-alloy steel ingots for pipe manufacture

SOURCE: Standartizatsiya, no. 9, 1965, 63

TOPIC TAGS: plasticity, steel, high alloy steel, hot rolling, pipe, solid mechanical property, metal heat treatment / OKh19N10T steel, Kh19N10T steel, OKh19N12T steel, Kh18N12T steel

ABSTRACT: The authors presented a general review of the new, revised standard specifications (ChMTU/TsNIIChM-1345-65) for high-alloy steel ingots used for pipe manufacture. The specifications were revised and adopted (some of them only tentatively) by the Central Scientific Research Institute of Ferrous Metallurgy and were intended to replace the previous standards ChMTU/TsNIIChM-700-62 and TU-752. It was specified that ingot diameters of 80 to 270 mm are to be used for seamless pipes. In this connection, it was mentioned that the Soviet metallurgical mills cannot produce high-alloy steel ingots greater than 200 mm. Chemical compositions of steels were specified in accordance with GOST-9940-62, GOST-9941-62 and GOST-5632-61. In order to diminish the effect

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ACC NR: AP6009132

4

of embrittlement at hot rolling, the alloy min. - max. percentages in certain steels were limited. Mechanical properties (tensile strength, etc.) of hot-rolled ingots were adopted in accordance with the standards for hot-rolled pipes without precising, however the conditions of heat treatment. The diameters of ingot samples used for macrostructure tests were extended up to 120 mm. Alpha-phase numbers must not exceed 2 for steels OKh18N10T, Kh18N10T, OKh18N12T, and Kh18N12T. A number 2.5 is allowed only upon mutual agreement. It was recommended to test ingots for plasticity by using the method of hot torsion. Finish allowance for ingot surfaces was accepted in accordance with the GOST-2789-59 standards.

SUB CODE: 11/ SUBM DATE: None / ORIG REF: 000 OTH REF: 000

Card 2/2 MLT

BALAKINA, N.A.

Unusual case of leukemoid (eosinophilic) reaction in lymphogranulomatosis in a child. Pediatriia, Moskva 36 no.8:60-63 Ag '58. (MIRA 12:1)

1. Iz kafedry detskikh bolezney (zav. - prof. A.I. Titova) Yaroslavskogo meditsinskogo instituta.

(HODGKIN DISEASE, in infant and child,
with eosinophilia (Rus))
(EOSINOPHILIA, in inf. & child,
in Hodgkin's dis. (Rus))

BALAKINA, N. A.

"Some Data on Congenital Toxoplasmosis of Children in the City and Oblast of Yaroslavl'."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Yaroslavl' Medical Institute

BALAKINA, N.A.

Complement fixation reaction with toxoplasmosis antigen in children in congenital defects of development. Pediatriia 38 no. 3:52-54 Mr '60. (MIRA 14:1)

(DEFORMITIES) (TOXOPLASMOSIS) (PREGNANCY, COMPLICATIONS) (COMPLEMENTS (IMMUNITY))

BALAKINA, N. A.

Cand Med Sci - (diss) "Congenital toxoplasmosis as one of the causes for defects in the intra-fetal development of children under conditions of the city of Yaroslavl' and Yaroslavskaya Oblast." Yaroslavl' , 1961. 13 pp; (Second Moscow State Medical Inst imeni N. I. Pirogov); 250 copies; free; (KL, 5-61 sup, 200)

PALKINA, N. M.

"Congenital Toxoplasmosis as one of the Reasons for Defects in the Pre-natal Development of Children"

Voprosy toksoplazmoza, report theses of a conference on toxoplasmosis, Moscow, 3-5 April 1961, publ, by Inst Epidemiology and Microbiology im. N. F. Gamaleya, acad. Med. Sci USSR, Moscow, 1961, 64pp.

3(10) PHASE I BOOK EXPLOITATION SOV/1663

Akademiya nauk SSSR. Komitet po geodezii i geofizike.

Tezisy dokladov na XI General'noy assambleye Mezhdunarodnogo geodezicheskogo i geofizicheskogo soyuza. Mezhdunarodnaya assotsiatsiya seysmologii i fiziki nedr zemli (Abstracts of Reports Submitted to the XI General Assembly of the International Union of Geodesy and Geophysics. The International Association of Seismology and Physics of the Earth's Interior) Moscow, 1957. 102 p. /Parallel texts in Russian and English/ 1,500 copies printed.

No additional contributors mentioned

PURPOSE: This booklet is intended for geophysicists, especially those specializing in seismology.

COVERAGE: This collection of articles deals with the structure and composition of the Earth and phenomena related thereto. The majority of the articles concern studies of earthquakes and seismic waves. Other articles cover the structure of the Earth's crust and mountain roots; the elastic properties of rocks at high pressures; the piezoelectric effect of rocks and the method of modelling in tectonophysics. The collection also contains articles on the Earth's thermal history, the microseismic method of tracing storms and others.

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modelling in tectonophysics. The collection also contains articles on the Earth's thermal history, the microseismic method of tracing storms, and others. No references are given.

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VVEDENSKAYA, A.V.; BALAKINA, L.M.

Characteristics of displacement fields of longitudinal and transverse waves traveling in the earth's crust. Biul. Sov. po seism. no.6:59-62 '57. (MIRA 11:3)

1. Institut fiziki Zemli Akademii nauk SSSR, Moskva.
(Seismic waves)

VVEDENSKAYA, A.V.; BALAKINA, L.N.

Certain characteristics of the displacement fields of longitudinal and transversal waves propagating along the earth's crust. Izv.AN SSSR.Ser. geofiz. no.8:1052-1054 Ag '57. (MLRA 10:8)

1.Akademiya nauk SSSR, Institut fiziki Zemli.
(Seismic waves)

SOV/49-59-8-5/27

AUTHORS: Vvedenskaya, A.V. and Balakina, L. M.

TITLE: Double Ray-Refraction in the Earth's Mantle

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 8, pp 1136-1146 (USSR)

ABSTRACT: Observations of the range of dislocations of the longitudinal (P) and transverse (SV, SH) waves propagating in the Earth's mantle disclosed an increase of amplitudes of the P and SV waves in relation to the SH waves when the seismic rays reached the depths 250-500, 900-1000, 1200-1300, 1800 and 2200 km. This can be explained by the polarization of transverse waves due to double refraction in the anisotropic layers of the Earth's mantle corresponding to these depths. Such an assumption is based on the theoretical analysis of the relationship u_p/u_{SH} (Eqs 1 and 2) as compared with the observed data (Figs 1-3). The existence of a double ray-refraction in the Earth's mantle can be theoretically defined by Eqs 3 to 10, while a relationship between the elastic contents in anisotropic layers can be calculated from

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Eqs 11 and 12. The nature of these layers, however, cannot be determined.

Acknowledgments are expressed to A. A. Treskov and Ye. F. Savarenskiy for their help.

There are 3 figures and 7 references, 4 of which are Soviet and 3 English.

ASSOCIATION: Akademiya nauk SSSR Institut fiziki Zemli (Institute of Physics of the Earth, Ac.Sc., USSR)

SUBMITTED: October 3, 1958

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SOV/49-59-11-8/28

AUTHOR: Balakina, L. M.

TITLE: On Distribution of Stresses Produced by the Foci of Earthquakes in North West Pacific

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 11, pp 1599-1604 (USSR)

ABSTRACT: The stresses of 24 earthquakes in North Pacific were investigated. The earthquakes are tabulated on p 1601, where the last 2 main columns give the direction of compressive and tensile stresses respectively. They are expressed in the angles measured from the lines directed North (A_Z) and from the vertical (i). The results of analysis are given in Figs 1 and 2 where directions of the horizontal components of the compressive and tensile stresses are shown respectively (1 - region of deep earthquakes, 2 - intermediate earthquakes, 3 - axis of volcanos, 4 - axis of deep ocean trench, 5 - horizontal components of stresses; focus numbers correspond to those in the first column of the Table). Thanks are

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VVEDENSKAYA, A. V.; BALAKINA, L. M.

Methods used and results achieved in determining stresses acting in earthquake foci of the Baikal region and Mongolia. Biul. Sov. po seism. no.10:73-84 '60. (MIRA 13:11)

1. Institut fiziki Zemli AN SSSR, Moskva.
(Baikal region--Seismometry)
(Mongolia--Seismometry)

S/169/61/000/011/007/065
D228/D304

AUTHOR: Balakina, L.M.

TITLE: Some results of the study of the foci of the earthquake of May 4 and June 18, 1959, from instrumental data

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1961, 15, abstract 11A142 (Byul. Soveta po seysmol. AN SSSR, no. 11, 1960, 25 - 31)

TEXT: The orientation of the axes of the chief stresses and the possible directions of movements at the foci were determined for the Kamchatka earthquakes of May 4 and June 18, 1959. The determination was made on the basis of the comparison of observations with formulas for elastic waves arising in a restricted fracture area, in whose plane the momentary displacement of edges in relation to each other occurs. The obtained results are compared with the previously-exposed principal orientation of stresses at the foci of earthquakes in the north-western part of the Pacific Ocean. [Abstractor's note: Complete translation].

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Papers submitted for the 15th Pacific Science Congress, Honolulu, Hawaii 21 Aug-
6 Sep 1961.

BALAKINA, L.M.

BALAKINA, L.M.; VVEDENSKAYA, A.V.

Change in the elastic properties and the density of matter on the edge of the earth's core. Izv. AN SSSR. Ser. geofiz. no.11:1457-1470 N '62. (MIRA 15:11)

1. Institut fiziki Zemli AN SSSR.
(Earth--Internal structure)