ORLEHOV, A.A., inzhener.

Wood bending machines. Der.prom.5 no.9:11-13 S '56. (MLRA 9:10)
(Woodworking machinery)

VARTAZAROV, S.Ya., kand.tekhn.nauk; VOLOKHOV, V.A., inzh.; OREKHOV, A.A., inzh.

Inspecting the quality of reinforced concrete elements using a radiometric method. Energ. stroi. no.20:62-64 '61. (MIRA 15:1)

1. Moskovskiy filial instituta "Oregenergostroy".
(Precast concrete--Testing)
(Gamma-rays--Industrial applications)

[illegible]KOV, A. D.

"Selection of Proper Grades of Silk and Half-Silk Weaves." Thesis for degree of Cand. Technical Sci Sub 2 Dec 52, Moscow Inst of National Economy imeni G. V. Plekhanov.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1952. From Vechernyaya Moskva, Jan-Dec 1952.

ORKHOV, Anatoliy Dmitriyevich; MUSINOV, Lev Nikolayevich; KAUFMAN, Vladimir Aleksandrovich; BORISOV, N.S., inzh., retsenzent; YATSENKO, V.A., inzh., retsenzent; FAL'KO, O.S., inzh., red.; GORDEYEVA, L.P., tekhn.red.

[New agricultural machinery; brief manual] Novye sel'skokhoziaistvennye mashiny; kratkii spravochnik. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 254 p. (MIRA 13:9)
(Agricultural machinery)

OREKHOV, A.D.; MUSINOV, L.N.; KAUFMAN, V.A.; KLETSKIN, M.I., inzh., retsenzent; ZHURAVLEVA, M.N., red. izd-va; MODEL', B.I., tekhn. red.

[New agricultural machines]Novye sel'skokhoziaistvennye mashiny; kratkii spravochnik. Izd.2., perer. Moskva, Mashgiz, 1962. 279 p. (MIRA 15:11)

(Agricultural machinery)

OREKHOV, A. I.

O nekotorykh voprosakh ekspluatatsii Rybinskogo vodokhranilishcha. [Some problems of exploitation of the Rybinsk water reservoir]. (Rechnoi transport, 1950, no. -, p. 17). DLC: TC601.R.

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

CREKHOV, A.L.

Device for cutting a groove in the shaft of an MAB-128/2 [illegible] motor. Mash. i neft. obor. no.7 '65. (MIRA 18:9)

1. Kontora bureniya neftepromyslovogo upravleniya "Priazovneft'".

ORLKHOV, A.N.

Automatic syringe. Veterinariia 34 no.10:62 O '57. (MLRA 10:11)

1. Moskovskaya veterinarnaya akademiya.
(Veterinary instruments and apparatus)
(Syringes)

OREKHOV, A. P.; SHESAREV, V. L.; KLIMENT'YEV, I. M.

The PKK-1,2 machine for harvesting paternal types of corn. Biul. tekh.-ekon. inform. no.11:51-53 '60. (MIRA 13:11)
(Corn picker (machine))

L 48316-65

ACCESSION NR: AP5011730 UR/0146/65/008/002/0027/0028

AUTHOR: Danilov, V. G.; Orekhov, A. P.

TITLE: Amplifier with simplified stabilization of electrometer tubes

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 2, 1965, 27-28

TOPIC TAGS: electrometer amplifier, electrometer pentode, electrometer tube stabilization/M24 microammeter

ABSTRACT: An electrometer amplifier with a simplified stabilization scheme, used to measure collector current in rf mass spectrometers, is described. The circuit diagram is shown in Fig. 1 of Enclosure. The amplifier utilizes a superminiature pentode in the first stage with a gain of 30, which eliminates the need for filament-circuit stabilization in the tubes of the succeeding stages. The circuit employs 100% negative feedback, and all stages are balanced networks, requiring only one degree of filament stabilization in the electrometer stage. To reduce gain, the voltage is applied to the screen grids of the tubes of the first stage from a divider. A cathode follower ensures low output resistance. The amplifier is used in conjunction with the M24 microammeter with changeable resistors for currents of 10^{-11} amp (65 mv).

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ACCESSION NR: AP5011730

10^{-10} amp (650 mv), 10^{-9} amp (6.5 v), and 10^{-8} amp (65 v). Drift does not exceed 3 μv/hr. Sensitivity can be improved by changing the measurement resistance from 6.5 to 1000 Gohm. Orig. art. has: 1 figure. [DW]

ASSOCIATION: Novosibirskiy elektrotekhnicheskiy institut. Kafedra elektronnykh priborov (Novosibirsk Electrotechnical Institute. Department of Electronic Devices)

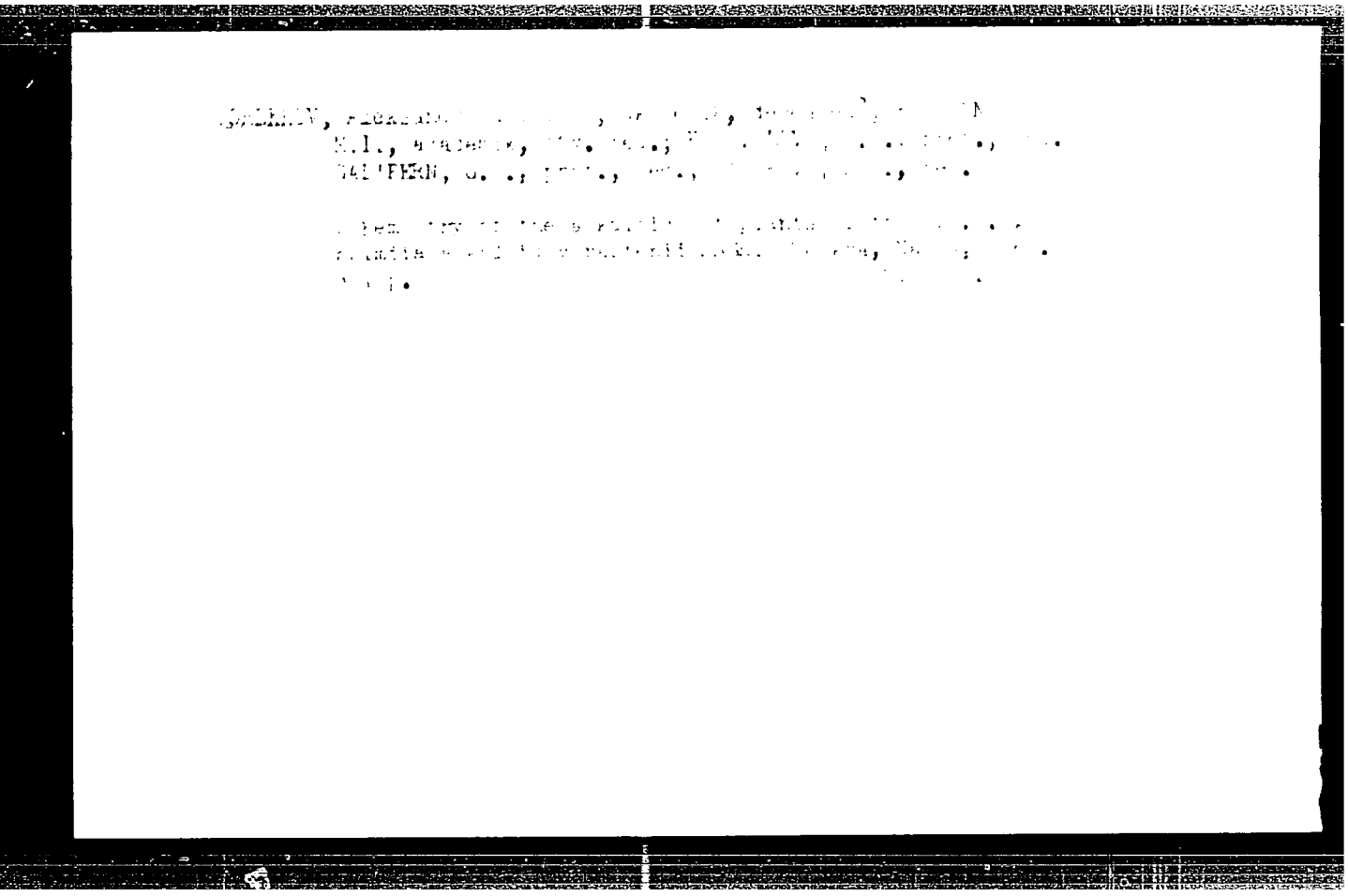
SUBMITTED: 26May64 ENCL: 01 SUB CODE: EC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3252

Card 2/3

OLEKHOV, Aleksandr Pavlovich (1881-1939), akademik; KABACHNIK, M.I., akademik, otv. red.; RUDENKO, V.A., red.

[Intramolecular rearrangements; studies in the field of theoretical organic chemistry] Vnutrimolekuliarnye peregruppirovki; issledovaniia v oblasti teoreticheskoi organicheskoi khimii. Moskva, Nauka, 1965. 310 p. (MIRA 18:9)



KHARCHENKO, Mariya Vasil'yevna; OREKHOV, Anatoliy Yegorovich; BAKHTEYAROV, V.D., red.; BEL'CHENKO, N.I., red.izd-va; SHITS, L.V., tekhn.red.

[Mechanization and automatic control of the production of woodwork; experience of the Volga Woodworking Combine] Mekhanizatsiia i avtomatizatsiia obrabotki stoliarnykh izdelii; opyt raboty Volzhskogo derevoobrabatyvaiushch ego kombinata. Moskva, Goslesbumizdat, 1958. 18 p. (MIRA 12:4)

(Joinery)

OREKHOV, B. D.

JOURNAL OF PHYSICAL CHEMISTRY

Vol XXXI, Nr 3, March, 1957

THE ACTION OF ULTRAVIOLET RADIATION ON AQUEOUS SOLUTIONS OF FERROUS SALTS

B. D. Orekhov, A. I. Chernova and *M. A. Proskurnin* (*Moscow*)

Summary

The photooxidation was investigated of ferrous ions in aqueous solutions containing 10^{-3} *M* Fe^{+2}, 0.2—5.0 *N* H_2SO_4 or 4.0 *N* HCl and dissolved air. It was found that under the given conditions the change in the Fe^{+2} concentration as determined by titration, considerably exceeds the concentration of the Fe^{+3} ions produced.

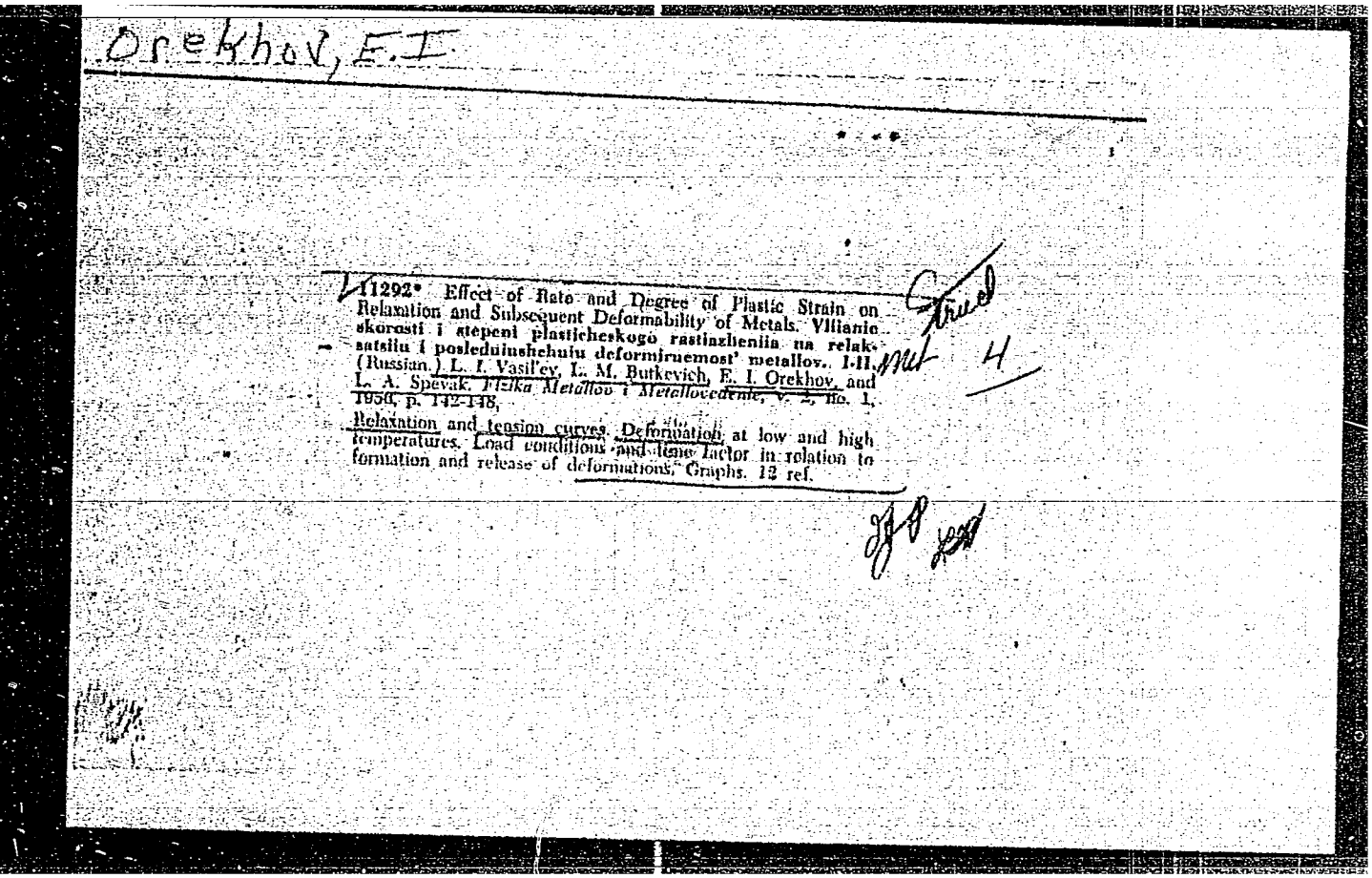
It is suggested that the main component absorbing the ultraviolet rays in the solution is the ferrous ion complex with molecular oxygen $Fe^{+2}.O_2$. On irradiation it forms the peroxide compound of tetravalent iron $Fe^{+2}OOH$, capable of transforming to the stable compound $Fe^{+2}\langle{}^{O}_{O}$ that does not titrate with permanganate and tetravalent cerium sulfate. A number of other properties of this compound is described.

The observed effect is compared with previous results on the action of γ-radiation on these solutions.

OREKHOV, B.I.

Mapping zones having varied fractured rock on the basis of borehole cores. Razved.i okhr.nedr 22 no.5:39-42 My '56.
(MLRA 9:9)

1. Yuzhnoural'skoye geoloupravleniye.
(Boring) (Engineering geology) (Prospecting)



Orekhov, E.I.

11292* Effect of Rate and Degree of Plastic Strain on Relaxation and Subsequent Deformability of Metals. Vliianie skorosti i stepeni plasticheskogo rastiazheniia na relaksatsiiu i posleduiushchuiu deformiruemost' metallov. I-II. (Russian.) L. I. Vasil'ev, I. M. Butkevich, E. I. Orekhov, and L. A. Spevak. *Fizika Metallov i Metallovedenie*, v. 2, no. 1, 1956, p. 142-148.

Relaxation and tension curves. Deformation at low and high temperatures. Load conditions and time factor in relation to formation and release of deformations. Graphs. 13 ref.

Name: OLEKHOV, Georgiy Erazmovich

Title: Docent

Affiliation: Leningrad Textile Inst imeni Kirov, Chair of Weaving

Date: 13 Oct 56

Source: DMVO 6/57

L 11379-65 EWT(m)/EWP(w)/EWP(t)/EWP(b) ASD(m)-3 MJW/JD/JT

ACCESSION NR: AP4041870 S/0133/64/000/007/0642/0645

AUTHOR: Alekseyenko, M. F., Vasilenko, G. I., Natapov, B. S., Orekhov, G. N., Pridantsev, M. V., Frantsov, V. P.

TITLE: Case-hardening and heat-treatable steels DI-2, DI-3, DI-3A (EP176) and DI-4

SOURCE: Stal', no. 7, 1964, 642-645

TOPIC TAGS: steel, case hardening steel, heat treatable steel, PI steel, low nickel steel, hardening temperature, tempering, steel mechanical property

ABSTRACT: The authors developed a group of low-nickel case-hardening steels which, in terms of their physical and mechanical properties, are comparable to the high-nickel steel currently used for high-stress pieces in the machine-building industry and which possess optimal properties of the case-hardened layer in finished items. The low-nickel steels DI-2 (18KhGSN2MVA) and DI-4 (18KhGSN2MA) were developed to replace steels 18Kh2N4VA and 20Kh2N 4VA, while steel DI-3A or EP176 was designed to replace steels 12KhN3A and 12Kh2N4A. The abbreviation "DI" used in connection with these newly-developed types stands for "dneprospetsstal'skaya issledovatel'skaya" or "Dneprospetsstal'

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L 11379-65

ACCESSION NR: AP4041870

Experimental". The expenditure of nickel for the new steels averages 20 - 25 kg/ton less than for the old. Steel DI-3, which does not contain molybdenum, is recommended exclusively as a replacement for type 12KhN3A steel. The molybdenum in DI-3 steel may be completely or partially substituted by tungsten in the ratio Mo : W = 1 : 3. In the development of the new types, provision was made to use the chromium-nickel-molybdenum steel scraps available in large quantities throughout the country. Particular attention was directed at the proper proportions of elements which promote and impede case-hardening. For this purpose, on specially smelted low-carbon alloys, a study was made of the mutual effect of the basic alloying elements (Cr, Mn, Si, Ni, W, Mo, V) on the carbon concentration in the layer. It was discovered that the greatest effect is exerted by chromium and silicon. The permissible limits (upper and lower) of the content of the basic elements in the new steels are shown in a table. No more than 0.06% vanadium and no more than 0.03% sulfur and phosphorus is permitted in the new steels. The physical and mechanical properties of the steels were thoroughly tested. When the effect of the hardening temperature in the 800 - 950C range on the mechanical properties of the steels was tested, both DI-2 and DI-3 showed high strength and plasticity, with an optimal hardening temperature at 820 - 860C. The effect of the

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tempering temperature on the mechanical properties of type DI-2 steel was also studyies and high tempering was recommended in an interval of 530 - 600C. It was further recommended that steel DI-2 be used for air hardening in a disk to 80 mm, and with oil hardening to 150 - 200 mm. Steel DI-3A and DI-4A are recommended for sections to 80 mm, and steel DI-3 - to 40 mm. The effect of long-term high-temperature heating on the new types was found to be negligible. These steels are distinguished by fine grain, the size of which, on heating to 1,000C, remains within 7-6 units. In terms of resilience (impact ductility), the new steels are comparable to high-alloy steels and retain rather good impact toughness even at a temperature of -196C. The article indicates that the new steels are highly resistant to notching (incising). For case-hardened items which operate under conditions of variable loads, an important characteristic is the endurance limit, which for these new economical steels is equal to that of high-nickel steels. A layer-by-layer chemical analysis showed that the carbon saturation of the case-hardened layer and its depth are the same in the new steels as in the high-alloy steels, but that the content of residual austenite is smaller. A further advantage of the new steels is the higher weakening temperature during tempering, which makes it possible to recommend them for items designed to function at temperatures up to 250 - 300C. The new low-cost steels also lend themselves well to nitriding. "V. Ye. Pronin, G. Kh. Gabuyev, Yu. P. Shamil', T. M. Babkov,

L 11379-65

ACCESSION NR: AP4041870

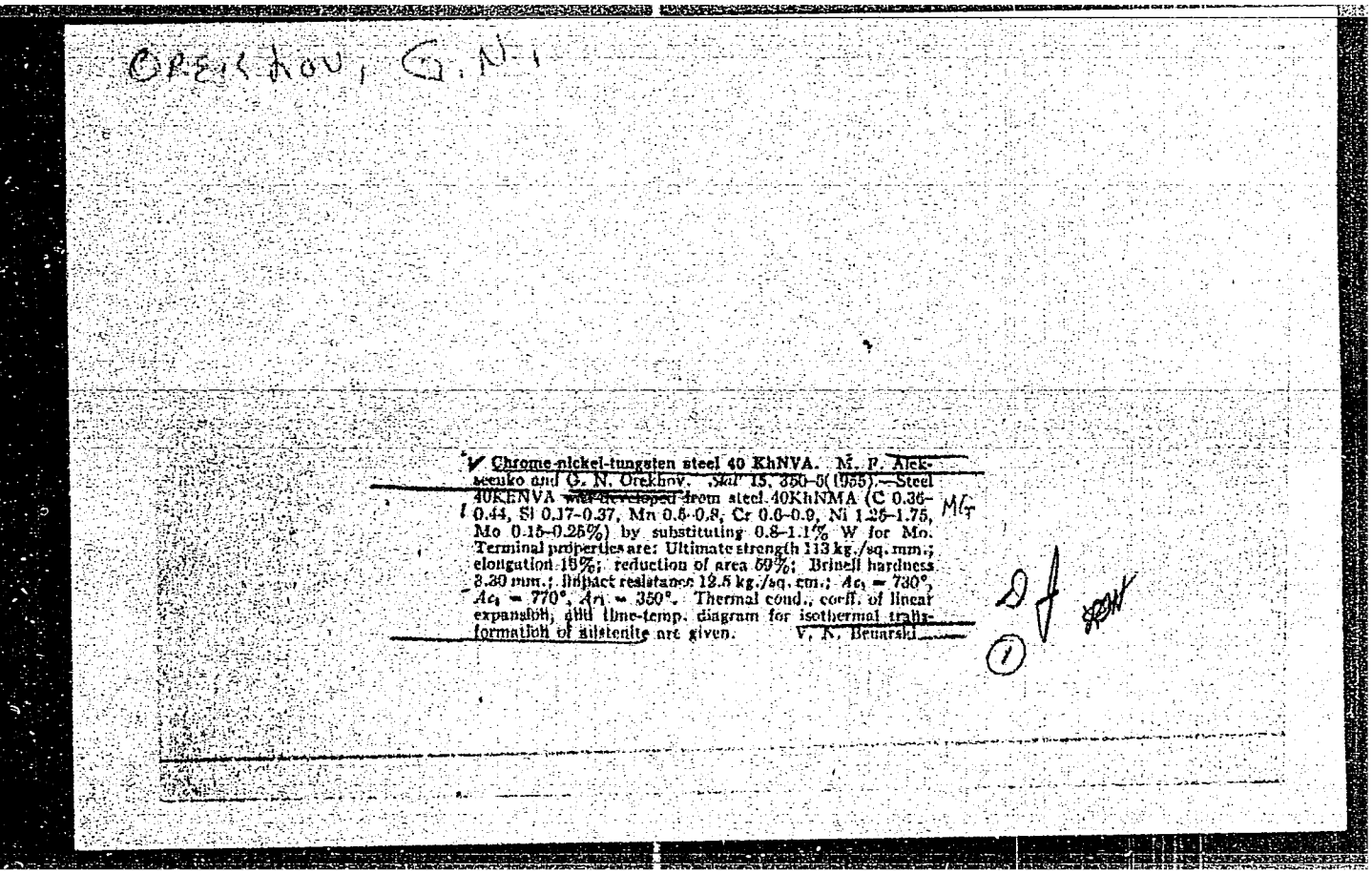
L. I. Yefremova, I. P. Banas, M. S. Kunin, G. V. Kuly*gin, Ye. L. Bushmanova, L. G. Kozy*reva, S. Z. Yudovich, P. I. Sklyarov, D. D. Tishchenko, V. M. Doronin and T. V. Levchenko also took part in the work." Orig. art. has: 1 table.

ASSOCIATION: none

SUBMITTED: 00 DATE SEL: 30Jul64 ENCL: 00

SUB CODE: MM NO REF SOV: 002 OTHER: 000

Card 4/4



OREKHOV, G. N.

Chrome-nickel-tungsten steel 40 KhNVA. M. P. Alekseenko and G. N. Orekhov. *Stal'* 15, 350–5 (1955).—Steel 40KhNVA was developed from steel 40KhNMA (C 0.36–0.44, Si 0.17–0.37, Mn 0.6–0.8, Cr 0.6–0.9, Ni 1.25–1.75, Mo 0.15–0.25%) by substituting 0.8–1.1% W for Mo. Terminal properties are: Ultimate strength 113 kg./sq. mm.; elongation 15%; reduction of area 59%; Brinell hardness 3.30 mm.; impact resistance 12.5 kg./sq. cm.; Ac_1 = 730°, Ac_3 = 770°, Ar_1 = 350°. Thermal cond., coeff. of linear expansion, and time-temp. diagram for isothermal transformation of austenite are given. V. N. Benarski

OREKHOV, G. I.

5

4E2c

18

Low-alloy structural steel. M. F. Alekseenko, G. I. Orekhov, R. [illegible], and K. A. Korkishchenko. U.S.S.R. 105,160, July 25, 1957. The steel contains C 0.12–0.18, Mn 0.7–1.2, Si 0.17–0.37, Cr 1.4–1.9, Ni 1.4–1.8, Ti 0.06–0.12, B up to 0.005%, rest Fe. M. Hosch

SOV/137-58-9-19967

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 269 (USSR)

AUTHORS: Alekseyenko, M.F., Alekseyeva, G.N., Orekhov, G.N., Fedotova, L.S.

TITLE: A Study of the Sensitivity of Structural Steels to Overheating (Izucheniye chuvstvitel'nosti konstruktsionnykh staley k peregrevu)

PERIODICAL: Metallovedeniye i term. obrabotka. Moscow, Metallurgizdat, 1958, pp 21-30

ABSTRACT: An investigation is made of the tendency of 15Kh2GNTA, 25Kh2GNTA, 30Kh2N2VA, and 30Kh3VA steels to overheat in the 900-1300°C temperature interval, and the possibility of correcting this tendency is studied. It is found that overheating may be corrected by normalization at 900-950°. The standard mechanical properties of the overheated and the normally treated metal are identical. The overheating effect is found in impact testing at -70°, in notch tensile testing at 8° notch angle and in fatigue testing; overheating reduces a_k from 9 to 3.4 kgm/cm^2, σ_b from 106 to 68-77 kg/mm^2, and σ_{-1} by 3-6 kg/mm^2. The correction of overheated steel by

Card 1/2

SOV/137-58-9-19967

A Study of the Sensitivity of Structural Steels to Overheating

normalization from a temperature of 150-180° higher than the Ac_3 point [illegible] firms the conclusions of a number of investigators to the effect that Chernov's point "B" cannot be identified with the Ac_3 point.

F.U

1. Steel--Heat treatment [illegible]--Temperature factor [illegible]

Card 2/2

129-[illegible]-1/1

AUTHORS: Gulyayev, A. P., Doctor of Technical Sciences, Professor
Rustem, S.L., Candidate of Technical Sciences and
Orekhov, G. N. and Alekseyeva, G.P., Engineers

TITLE: Investigation of New Die Making Steels for Hot Stamping of High Temperature Alloys (Issledovaniye novykh shtampovykh staley dlya goryachey shtampovki zharoprochnykh splavov)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 7 pp 2-10 + 4 plates (USSR)

ABSTRACT: This study has been awarded a prize at the Imeni D.K.Chernov NTO Mashprom competition for the best research work carried out in 1955-1957. For hot stamping the Soviet steels 5KhNM and 5 KhGM were used in the past and were subsequently substituted by various steels not containing molybdenum, which is a scarce material in the Soviet Union. In the introduction the authors summarise the effects of the individual elements thus: tungsten ensures red hardness up to 620°C and improves the wear resistance. A tungsten content exceeding 10% will not bring any further improvement in the properties. On the other hand, it affects adversely the resistance of the materials to temperature

Card 1/5

Investigation of New Die Making Steels for Hot Stamping of High Temperature Alloys

changes, it brings about an increase in the quantity of ferrite at the hardening temperature and a tendency to form grinding cracks. 2. Molybdenum is twice as effective as tungsten. For an equal hardness, molybdenum steel will have better physical properties than tungsten steel. Molybdenum improves the hardenability, increases the resistance to scoring, improves the hardness. However it reduces the hardening temperature range, it causes surface decarburisation and makes the steel susceptible to grain growth. 3 Chromium reduces the tendency of the steel to oxidise, improves the hardenability and ensures red hardness up to 425°C. However, longer heating is necessary for dissolving the carbides. 4 Vanadium refines the grain size. 5. Silicon influences the character of the scale forming in air; instead of a dense film an easily removeable powdery oxide is obtained. Furthermore it increases the wear resistance. Of great importance is carbon which increases the strength, the wear resistance and the hardenability. However, an increased carbon content brings about increased brittleness and scaling

Card 2/5

Investigation of New Die Making Steels for Hot Stamping ... Temperature Alloys

cracks. Die-making steel contains 0.25 to 0.5% ... Fifteen new grades of die-making steels were ... and investigated. For comparing the properties of ... steels the Soviet steel 3Kh2V8 has also been investigated and the respective values are used as reference values. The chemical compositions of the investigated steels are entered in Table 1, p.3. A technique has been developed for testing die-making steels. The obtained results are described in great detail; they are also entered in tables and plotted in graphs. In Fig.1, p.4 the influence of the hardening temperature on the hardness of some experimental steels is graphed. Figs. 2-7 (p. ...) show the micro-structure of some of the investigated steels after various heat treatment regimes. In Fig. ... the dependence is graphed of the hardness of some of the experimental steels on the tempering temperature. Fig. ... shows the hardenability of the experimental steel. Fig.8 shows the dependence of the strength of the experimental steels on the test temperature. Fig. ... shows the dependence of the yield point of the investigated

Card 3/5

Investigation of New Die Making Steels for Hot Stamping of Hi... Temperature Alloys

steels on the temperature. Fig.10 shows the dependence of the relative elongation of the investigated steels on the temperature. Fig.11 shows the dependence of the relative contraction of these steels on the temperature. Fig.12 shows the dependence of the impact strength of the investigated steels on the temperature. Fig.13 shows the hot hardness of the experimental steels. Fig.14 indicates the resistance to temperature changes of the individual experimental steels. Table 2 gives the hardness of the investigated steels after annealing and tempering from various temperatures. Table 3 shows the hardness of the experimental steels after heating to the hardening temperature and cooling under various conditions. The main data on the mechanical properties and chemical compositions of the experimental steels are summarised in Table 5. The most important properties of these steels from the point of view of manufacturing were determined. Furthermore, four steels for manufacturing dies to be used for stamping high temperature steels are proposed, the chemical analysis of

Card 4/5

129-58-[illegible]

Investigation of New Die Making Steels for Hot Stamping [illegible] Temperature Alloys

are entered in Table [illegible], p.10. The authors [illegible] testing these steels under shop conditions.
There are 14 figures, 3 tables and 7 references, 1 of which is Soviet, 1 German and 5 English.

ASSOCIATION: Moskovskiy vecherniy mashinostroitel'nyy institut (Moscow Evening Mechanical Engineering Institute)

Card 5/5

SOV/129-59-5-12/17

AUTHORS: M.P. Alekseyenko, N.F. Lashko, N.M. Popova, G.N. Orekhov

TITLE: Phase Analysis of Heat Resistant Constructional Steels (Fazovyy analiz teplostoykikh konstruktsionnykh staley)

PERIODICAL: Metallovedeniye i Termicheskaya Obrabotka Metallov, 1959, Nr 5, pp 52-54 (USSR)

ABSTRACT: The authors investigated the phase composition and the mechanical properties of the steels 30Kh3VA, 30Kh2N2VA (i.e. with differing vanadium contents) and of the steel EI415. The results of the strength tests after heat treatment (quenching in oil followed by tempering) for each of these steels are entered in a table on page 53. The carbide analysis was effected on 12 mm diameter, 60 mm long specimens which served as anodes and dissolved in an electrolyte for a duration of 5 hours with a current density of 0.2 A/cm^2, following which the solution was cooled to 0°C. The Fe, Cr, Mn, W, V and Mo contents of the carbide precipitates were determined. In Fig 1 the influence is graphed of the tempering time at 500 °C of the steels 30Kh2N2VA (curves 1 and 2) and 30Kh3VA (curves 3 and 4) on the contents of individual elements which are combined in the carbides. In Figs 2 and 3 the

Card 1/3

Phase Analysis of Heat Resistant Constructional Steels

influence is graphed of the tempering time at 600
the steels 30Kh2N2VA and 30Kh3VA respectively on the
contents of Cr and Fe which are combined in the
cementite and trigonal chromium carbide; the effect
vanadium additions on the mechanical properties and
sustained strength of 30Kh2N2VA steel is graphed in
4 and 5. The results of analysis of phase compositions
30Kh2N2VA steels with various vanadium contents are
explaining their behaviour in tests for sustained
strength at 550 °C. The sustained strength of the steel
by the hardening of the solid solution, its thermal
stability and also its interaction with the remaining
phases. The hardening effect of the rejected phases
the steel depends on their degree of dispersion and
proneness to diffusion interaction with the solid
solution; the lower the speed of formation and the
slower the growth of the germinations, the greater will
be the hardening effect on the steel. After tempering at
650 °C the carbide phases in the steel El4 are formed
only partly with the alloying elements W, Mo, V and
Card 2/3 The alloying elements which remained in the solid

Phase Analysis of Heat Resistant [illegible]tructional Steels

solution, slowed down diffusion process and [illegible] solid solution. After tempering at 650 °C for [illegible] 2.2% Cr remained in the solid solution. Subsequent tempering at 500 °C for 10 and 500 hours had little effect on the redistribution of the alloying element[illegible] between the carbides and the solid solutions. Such alloying distinguishes favourably the steel EI-[illegible] other steels of similar composition
There are 5 figures and 1 table.

Card 3/3

S/123/61/000/012/002/042
A004/A101

AUTHORS: Gulyayev, A. P.; Rustem, S. L.; Orekhov, G. N.; Alekseyeva, G. P.

TITLE: New steels for the drop forging of heat-resisting alloys

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 12, 1961, 12, abstract 12A91 (V sb. "Metallovedeniye i term. obrabotka metallov". [Tr. Sektsii metalloved. i term. obrabotki metallov. Tsentr. pravl. Nauchno-tekhn. o-va mashinostroit. prom-sti, no.2], Moscow, 1960, 179-196)

TEXT: The authors investigated the physical-mechanical properties (hardenability, optimum heat-treatment conditions, heat-resistance, tempering ability, hardness, scale resistance, resistance to adhesion, conglomeration ability, etc.) of 16 steel compositions used for the drop forging of heat-resisting alloys. Based on the tests carried out, the steel grades 4Х3В8М (4Kh3V8M) and 4Х3В2М2Ф (4Kh3V2M2F) are recommended for forging dies.

[Abstracter's note: Complete translation]

Card 1/1

82582

S/148/60/000/006/006/010

18.1150

AUTHORS: Vinarov, S. M., Alekseyenko, M. F., Orekhov, G. N.

TITLE: Heat-Resistance of Austenitic High-Phosphorus Steel

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 1960, No. 6, pp. 106-113

TEXT: There are no literature data available on the effect of phosphorus alloying of complex alloy steels on their mechanical properties, particularly at high temperatures. This effect was determined by short-time and long lasting tests after quench hardening from 1,100°C and aging at 780°C for 16 hrs. Results of tests are given in a series of tables. It was established that alloying of austenitic steel with phosphorus increased the effect of aging and raised considerably the steel strength at room temperature and at 600-700°C. The relativ increase in the ultimate strength and the yield point at high temperatures was greater than at room temperature. Endurance strength also increased considerably. In steel without molybdenum, alloying with phosphorus caused an increase in the ultimate strength at 650°C from 18 -19 to 33 kg/mm^2, i. e. by 65%. In steel containing 0.6-0.7% Mo the strength increased from 23 to 43 kg/mm^2, i. e. by 87%. To raise the heat resistance of complex alloyed austenitic steels

Card 1/2

82720

3/133/60/000/006/002/002

18.7100

AUTHORS: Alekseyenko, M. F., Candidate of Technical Sciences, Orekhov, G. N., Engineer

TITLE: 15Х2ГН2ТРА (15Kh2GN2TRA) Type Boron Steel - Substitute for the 12ХН3А (12KhN3A), 12Х2Н4А (12Kh2N4A) and 18ХНВА (18KhNVA) Type Steels

PERIODICAL: Stal', 1960, No. 6, pp. 548-551

TEXT: The chrome-manganese-titanium-boron containing 15Kh2GN2TRA alloy has proved a success when used instead of the case-hardening structural steels with 3-5% Ni content (12KhN3A, 12KhN4A, 18KhNVA, 13H5A-13N5A, 21H5A-21N5A, etc.). The alloy under investigation has the following composition: C 0.12-0.18%; Mn 0.7-1.0%; Si 0.17-0.37%; Cr 1.4-1.8%; Ni 1.4-1.8%; Ti 0.06-0.12%; B 0.001-0.005%; S $\leq$ 0.03%; P $\leq$ 0.03%. First, the alloy was produced without boron, but it was found that by adding 0.001-0.002% of boron to the alloy, the hardenability was raised from 50 mm up to 85 mm without increasing the grain size, as evidently boron is adsorbed at the boundaries of the austenitic particles thus reducing their tendency for growing. As a consequence, the delay of transformation

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15Х2ГН2ТРА (15Kh2GN2TRA) Type Boron Steel - Substitute for the 12ХН3А (12KhN3A), 12Х2Н4А (12Kh2N4A) and 18ХНВА (18KhNVA) Type Steels

decreases the critical hardening rate and increases hardenability. The 15Kh2GN2TRA type steel can easily be case-hardened and cyanized, while after these treatments it contains considerably less residual austenite than other types, and moreover, no cold treatment is necessary. It shows less deformation during heating than the steels compared, its cementation can take place in a carburator of lower activity. In spite of the presence of Cr, Ti and B, its critical points are fairly low (A_{c_1}=710°-730°C; A_{c_3}=780°-830°C) and for this reason hardening can be started already from 800°-850°C. The mechanical properties of this steel after hardening at the temperatures mentioned and tempering at 150°-170°C, are indicated by the following values (according to ЧМТУ-ChMTU-5596-56): σ_B 105 kg/mm^2. $\sigma_{0.2}$ 90 kg/mm^2, δ 12%, Ψ 55%, a_k 10 kgm/cm^2, d_B 3.45-3.15 mm. When raising the hardening temperature from 780°C to 850°C the strength indices of the new steel increase, while its plasticity remains unchanged. A further increase in temperature does not affect these values, showing that the boron containing steel can be heated in a wide temperature range. This steel can be applied to products subjected to a high degree of tempering. Even

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15Х2ГН2ТРА (15Kh2GN2TRA) Type Boron Steel - Substitute for the 12ХН3А (12KhN3A), 12Х2Н4А (12Kh2N4A) and 18ХНВА (18KhNVA) Type Steels

when increasing tempering temperature up to 450°C its strength properties do not change. The dependence of the cementation layer of this steel on the temperature of the process and the holding time is similar to that of steels of the same sort (data of N. K. Sadkov, A. D. Porgova and L. Ya. Kashennik): at higher temperatures and at longer holding times cementation is more intensive. The thickest cementation layer can be obtained at 1,000°-1,050°C. The mechanical properties of the boron steel, at a hardening temperature of 850°C and tempering at 160°C are practically independent of previous cementation (at 900°-1,000°C) and the holding time applied. The torsion tests carried out according to V. V. Chugunov on cylindrical 12KhN3A and 15Kh2GN2TRA steel specimens of 10 mm diameter showed that at an increasing temperature of cementation the plastic properties of the case-hardened layer deteriorate but in spite of this, the torsion test results are 10%-12% better for boron steel than for the 12KhN3A type. The microstructural analyses of both steels show that due to its titanium content there is no growth of the grains in the boron steel. Tests were also made to determine the stress conditions and the carbon content, the sensitivity against notches and its toughness.

15Х2ГН2ТРА (15Kh2GN2TRA) Type Boron Steel - Substitute for the 12ХН3А (12KhN3A), 12Х2Н4А (12Kh2N4A) and 18ХНВА (18KhNVA) Type Steels

Flaking, however, is a drawback of boron steels, but it was found that by magnetic mixing in 25-ton baths and by blowing argon through the bath (2-3m^3/ton of steel) the hydrogen content of the metal could be decreased from 8 to 4-5cm^3/100g and consequently flake forming was decreased. There are 3 figures and 3 tables.

Card 4/4

VINAROV, S.M., doktor tekhn.nauk; ALEKSEYENKO, M.F., kand.tekhn.nauk; ORLKHOV, G.N., inzh.

Nitrided chromium-manganese, high-carbon, stainless steel for work at high temperatures. Trudy MAI no.123:41-44 '60. (MIRA 13:8)

(Steel, Stainless) (Metals at high temperature)

3452h
S/659/61/007/0[illegible]
D217/D303

18.1120

AUTHORS: Lashko, N F., Popova, N M., Orekhov, G N and Vinogradova, Ye A

TITLE: Carbo-boride phases in alloy steels

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 7, 1961, [illegible]

TEXT: The authors endeavored to find whether carboborides based on carbide phases of the type $Me_{23}C_6$ can exist in steels. Two varieties of carbide of the above type have been found in steels: $Fe_{21}W_2C_6$ and $Cr_{23}C_6$. Therefore, two steels were investigated, each containing one of the $Me_{23}C_6$ types of carbide. The steel 30Kh2N2VA (30KhN2VA) was used as the $Fe_{21}W_2C_6$ containing material, in which this compound forms independently, or together with the carbide Me_3C. Steel EI268 (EI268) was used as a representative steel containing carbide based on $Cr_{23}C_6$. The steels were melted in a high frequency

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S/659/61/[illegible]
D217/D303

Carbo-boride phases in alloy steels

furnace of 150 kg capacity and cast into ingots weighing [illegible] kg in such a manner that each ingot should have a definite boron [illegible]. The ingots were forged into rods, which were oil-quenched from [illegible] °C They were then tempered at 600° and 700°C for 30 minutes 10, 100 and 300 hours. For the separation of the anode deposit from specimens of steel 30Kh2N2VA, electrolytic dissolution for 5 hours in an ice-cold solution consisting of 75 g/l KCl + 5 g/l citric acid was used at a low current density (0.02 A/dm^2) The precipitates obtained were analyzed chemically for Fe, Cr and W For the estimation of B an anodic deposit was again produced, it was washed with water by decantation, transferred into a conical flask and decomposed with a little H_2SO_4 (1 : 2) with addition of a few drops of H_2O_2 After dissolving the deposit the solution was boiled until the H_2O_2 was completely decomposed Small quantities of B were determined calorimetrically, and larger quantities [illegible] volumetrically. In order to separate the anode deposit from the Ni steel EI268, anodic dissolution was used in a solution of

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Carbo-boride phases in alloy steels

ing 75 g/l KCl, 5 g/l $Na_2S_2O_3$, 20 ml/l HCl (1.19) at 20° C, and a current density of 0.02 A/cm^2 for 4 hours. An X-ray investigation was carried out, using the powder method, in Co, Fe and CuKα radiation. It was found that B added to steel 30Kh2N2VA, decreases the solid solubility of Cr and W, and in steel EI268 the solid solubility of Cr. In boron-free 30Kh2N2VA steel, the carbides $(Fe, Cr)_7C_3$ and $Fe_{21}(W, Cr)_2C_6$ form, according to temperatures and duration of tempering. According to the boron content and tempering conditions, the carbo-boride phases $(Fe, Cr)_3(C, B)$, $Fe_{21}(W, C)_2(C, B)_6$ and the carbide phase $Fe_{21}(W, Cr)_2C_6$ form. An EI268 steel containing 0.1 - 0.2 % B, contains a carboboride phase of variable composition, $(Cr, Fe)_2(B, C)$ having a rhombic crystal structure. Alloying steel 30Kh2N2VA with boron causes a decrease in static strength, plasticity and creep resistance at 20°C. The stress to failure at 550°C is higher than that of steel free from B. The mechanical properties of the steel EI268 on testing for static [illegible]

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S/659/61 [illegible]
D217/D303

Carbo-boride phases in alloy steels

re changed little on alloying it with B up to 0.2[illegible] %. The stress to fracture at 550°C of steel EI268 containing 0.018 - 0.[illegible]5 % B [illegible] what higher than that of boron-free steel. There are 6 figures, 3 tables and 3 non-Soviet-bloc references. The references to the English-language publications read as follows: M E. Nicholson, J. Metals, 9, no. 1 (section 2), 1957; R. Kiessling, Acta Chem. Scand., 3, 1949.

X

Card 4/4

S/126/61/012/003/013/021
E111/E335

AUTHORS: Lashko, N.F., Orekhov, G.N. and Popova, N.M.

TITLE: Metastable processes in the ageing of heat-resisting pearlitic steel

PERIODICAL: Fizika metallov i metallovedeniye, v. 12, no. 3, 1961, 417 - 423

TEXT: Heat-treatment of pearlitic steel is generally used to produce an initial structural condition giving minimum diffusion-process rates. The number of structural changes possible in the transition of complex, pearlitic, medium-carbon alloy steels from the metastable to the stable state is greater than in low-carbon steels. Control of the process in which diffusion is slowed down to the greatest extent would enable the heat-resistance of the steels to be controlled, which is particularly important for medium-carbon steels with their rapid diffusion processes. Many oil-quenched pearlitic steels develop residual austenite, whose chemical composition and quantity depend on quenching temperature and cooling rate. By changing the paths by which the residual austenite is formed the paths

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S/126/61/012/003/013/021
E111/E335

Metastable processes ....

of the carbide transformations in the steels can be changed. The authors have studied this for Х2Н2ВФА (Kh2N2VFA) steel (actual composition, %: 0.52 Mn; 0.31-0.37 Si; 1.92-1.96 Cr, 1.60-1.69 Ni; 1.22-1.27 W; 0.27-0.30 V, 0.023 S and 0.008 P) with carbon contents of 0.09 - 0.44%. Forged bars were pre-normalized at 980 °C, those of one charge were also pre-quenched from 1 100 °C. After hardening the bars were subjected to further heat-treatment and short- and long-time strength testing. Phases of the treated specimens were analysed by study of anodic residues, using X-ray structural and chemical analyses. The results show that it is possible to control the decomposition of metastable solid solution in type Kh2N2VFA steels by changing quenching conditions and carbon contents. The residual austenite decomposes on ageing at 500 - 650 °C, forming the special carbides Me_7C_3, VC and $Me_{21}W_2C_6$. When these steels contain 0.09 - 0.27% carbon, tempering after quenching from 920 and 1 100 °C produces simple carbides (Me_3C, Me_7C_3, VC), with

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Metastable processes ....

0.4% C, ageing at 600 - 650 °C gives the complex carbide of the $Me_{21}W_2C_6$ type after quenching from 920 °C. Preliminary quenching from 1 100 °C leads to higher thermal stability because of the higher degree of dispersion of the carbides and relatively higher degree of alloying of the solid solution. On tempering at 500 - 550 °C, the processes retarding plastic deformation predominate over the weak coagulation of the carbide phases. At 600 - 650 °C carbide-formation and growth processes predominate; they occur more rapidly in steels with higher carbon contents and produce loss of strength in the solid solution and also loss of thermal stability of the steels. There are 7 figures, 3 tables and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: October 5, 1960 (initially)
March 11, 1961 (after revision)

Card 3/3

OREKHOV, G.N.

AID Nr. 977-7 27 May

NEW STEEL FOR CARBURIZING (USSR)

Orekhov, G. N., M. F. Alekseyenko, Ye. L. Bushmanova, and V. M. Doronin. Vestnik mashinostroyeniya, no. 3, Mar 1963, 42-44.
S/122/63/000/003/006/008

The ЭП176 steel [0.11-0.17% C, 0.65-0.95% Mn, 0.40-0.80% Si, 1.3-1.7% Cr, 1.6-2.0% Ni, 0.20-0.35% Mo, or 0.60-1.0% W] developed at the Elektrostal' Plant is intended as a substitute for 12XH3A, 12X2H4A, and other high-nickel steels. It is suitable for carburizing and cyaniding. Carbon concentration in a carburized (at 920°C for 12 hrs) layer reaches 0.8 to 1.2%, and the surface hardness in the heat-treated condition (oil quenching from 820-850°C and tempering at 170-200°C) exceeds 58 RC. Sub-zero treatment increases surface hardness to more than 60 RC. The mechanical properties of ЭП176 are identical to those of the 12X2H4A steel (tensile strength, 100 kg/mm²; yield point, 80 kg/mm²; elongation, 12%; reduction of area, 55%; impact strength, 10 kgm/cm²). The microstructure of the carburized layer is satisfactory. No residual austenite or carbide network is present. The ЭП176 possesses a low notch sensitivity. [AZ]

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OREKHOV, G.N., inzh.; ALEKSEYENKO, M.F., kand.tekhn.nauk

Highly resistant, economical 30Kh2N2VA chromium-nickel-tungsten steel.
Stal' 23 no.12:1115-1117 D '63. (MIRA 17:2)

ALEKSEYENKO, M.F.; VASILENKO, G.I.; NATAPOV, B.S.; OREKHOV, G.N.; PRIDANTSEV, M.V.; FRANTSOV, V.P.

Case-hardenable and improved DI-2, DI-3, DI-3A (EP176), and DI-4 steel. Stal' 24 no.7:642-645 Jl '64. (MIRA 17:1)

L 41073-66 EWT(m)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/WB/DJ
ACC NR: AP6027299 SOURCE CODE: UR/0133/66/000/008/0752/0755

AUTHOR: Doronin, V. M.; Smirnov, V. V.; Klyuyev, M. M.; Alekseyenko, M. F.; Orekhov, G. N.

ORG: none

TITLE: Stainless heat-resistant 15Kh16N2M steel

SOURCE: Stal', no. 8, 1966, 752-755

TOPIC TAGS: CORROSION RESISTANT STEEL, stainless steel, martensitic ~~stainless~~ steel, ~~martensitic~~ heat resistant steel, SOLID mechanical property, ~~steel heat resistance, steel corrosion resistance~~/15Kh16N2M stainless steel

ABSTRACT: A new stainless and heat-resistant steel designated 15Kh16N2M has been developed for use in parts operating under stresses at elevated temperatures up to 500C in marine or tropical atmospheres. The steel is intended to replace previously used 1Kh12N2VMF, 13Kh14NVFRA, Kh17N2, and DI-1 steels. The two former are heat resistant at temperatures up to 500—600C but are susceptible to corrosion in marine and tropical atmospheres. The latter two have a high corrosion resistance but are not suitable for operation at temperatures over 400C. In addition, Kh17N2 steel has a poor forgeability owing to a two-phase structure with a delta-ferrite content of up to 40%. 15Kh16N2M steel has none of the above disadvantages. It contains 0.12—0.18% carbon, 15.0—16.5% chromium, 2.0—2.5% nickel, 1.2—1.5%

UDC: 669.14.018.45.8

Card 1/3

molybdenum, and 0.005—0.12% nitrogen. Steel austenitized at 1040—1050C (optimum temperature) and oil quenched has a martensitic structure with 5—10% deltaferrite. The best combination of strength and ductility (for elevated temperature service) is achieved by tempering at 500-550C or 660-680C (see Fig. 1) At 500C, steel

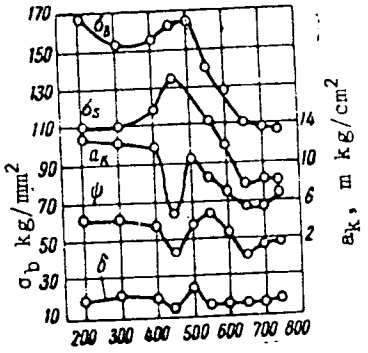

Fig. 1. Tempering temperature dependence of tensile strength (σ_b), yield strength (σ_s), elongation (δ), reduction of area (ψ), and notch toughness (a_k) of 15Kh16N2M steel, oil quenched from 1050C.

tempered at 580C had a 100 hr rupture strength of 45 kg/mm^2, a 500 hr rupture strength of 40 kg/mm^2, a creep strength of 27 kg/mm^2 (for 0.2% total creep in 100 hr), and a fatigue strength of 45 kg/mm^2 for smooth specimens and 26 kg/mm^2 for notched specimens. Conventionally arc-melted steel has a rather high anisotropy of

L 41073-66
ACC NR: AP6027299

mechanical properties, which can be greatly reduced by electroslag melting. The corrosion resistance of 15Kh16N2M steel is close to that of Kh17N2 steel, but the former is not susceptible to pitting. Orig. art. has: 5 figures and 4 tables. [DV]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 5057

Card 3/3 11b

L 42222-66 EWT(m)/EWP(t)/ETI LJP(c) JD/JT
ACC NR: AP6029056 SOURCE CODE: UR/0413/66/000/014/0082/0082

INVENTOR: Averchenko, P. A.; Alekseyenko, M. F.; Babakov, A. A.; Babitskaya, A. N.; Batrakov, V. P.; Bondarenko, A. L.; Gabuyev, G. Kh.; Yel'tsov, K. S.; Kulygin, G. V.; Loiá, V. N.; Orekhov, G. N.; Pridantsev, M. V.; Sklyarov, P. I.; Smolyakov, V. F.; Soroko, L. N.; Solov'yev, L. L.; Frantsov, V. P.; Shamil', Yu. P.; Moshkevich, Ye. I.; Natanov, B. S.

ORG: none

TITLE: Stainless steel. Class 40, No. 183947.

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 82

TOPIC TAGS: stainless steel, chromium titanium steel, molybdenum containing steel, nitrogen containing steel, titanium containing steel

ABSTRACT: This Author Certificate introduces a stainless steel containing chromium, molybdenum, and nitrogen. In order to improve weldability, the steel has the following composition: 0.08% C, up to 0.8% Mn, up to 0.8% Si, 15—18% Cr, 0.2—0.6% Mo, 0.04—0.15 N, 0.4—1.2% Ti, up to 0.035 S, and up to 0.030 P. [WW]

SUB CODE: 11/ SUBM DATE: 30Jan65/ ATD PRESS: 5015

Card 1/1 UDC: 669.14.018.8: 669.15'26-194

OREKHOV, I.

Serious shortcomings of the book "Investigating damage in Howden-Johnson boilers," edited by M.I. Volskii. Reviewed by I. Orekhov. (MIRA 15:7)
Mor. flot 22 no.7:45-46 Jl '62.

1. Glavnyy inzhener Murmanskoy inspektsii Registra SSSR.
(Boilers, Marine) (Volskii, M.I.)

OREKHOV, I.

Improving the scavenging of combined steam boilers.
Mor. flot 22 no.11:23-25 N '62. (MIRA 15:12)

1. Glavnyy inzh.-inspektor Murmanskoy inspektsii Registra SSSR.

(Boilers, Marine—Cleaning)

OREKHOV, I.

Causes of the damage of boiler furnaces operating on liquid fuel and measures for their prevention. Mor. flot. 24 no.5:28-29 My '64. (MIRA 18:12)

1. Glavnyy inzh.-inspektor Murmanskoy inspektsii Registra SSSR.

OREKHOV, Ivan Gerasimovich; IVANOV, P.I., red.

[Accidents in marine boiler plants] Avarii sudovykh kotel'nykh ustanovok. Moskva, Izd-vo "Transport," 1964. 109 p. (MIRA 17:5)

POZIN, M.Ye.; TARAT, E.Ya.; OREKHOV, I.I.

Ammonium absorption from coke gas in a bubble type apparatus.
Koks i khim. no.9: [illegible]. (MIRA 16:10)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Packed towers) (Ammonium) (Coke gas)

POZIN, M.Ye.; TARAT, E.Ya.; OREKHOV, I.I.

Intensification of ammonia distillation from weak ammoniacal liquor. Kosk i khim. no.12:35-40 '63. (MIRA 17:1)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.

[redacted]

POZIN, M.Ye., doktor tekhn.nauk; TARAT, E.Ya., kand.tekhn.nauk; OREKHOV, I.I., kand.tekhn.nauk; TERESHCHENKO, L.Ya., kand.tekhn.nauk

Calculating the efficiency of the shelves of frothers for absorption and desorption processes. Khim. i neft. mashinostr. no.9:11-13 S '65. (MIRA 18:10)

Orekhov, Ivan Mikhaylovich; UL'YANTSEV, P.S., red.; PULIN, L.I., tekhn. red.

[Fulfilling the seven-year plan] V ritme semiletki. Tula, Tul'skoe knizhnoe izd-vo, 1961. 22 p. (MIRA 14:12)
(Novotul'skiy—Steelworks)

OREKHOV, I.N., inzh.

Reducing air noises in compartments. Sudostroenie 24 no.3:59-60 Mr '58. (Ships--Soundproofing) (MIRA 11:4)

ORLKHOV, I.N.; BYDOVICH, A.I., master

Electric wiring in steam tunnels. Energetika 8 no.3:17 Mr '60. (MIRA 13:6)
(Electric wiring, Interior)

OREKHOV, I.N.

New design of insulated tongs. Energetik 9 no.3:21-22 Mr '61.
(MIRA 14:7)

(Electric cutouts)

POD"YACHIKH, P.G., red.; OREKHOV, K.A., otv. za vypusk; SOLDATOV, V.A., red.; PYATAKOVA, N.D., tekhn. red.

[Results of the 1959 all-Union population census; the Georgian S.S.R.] Itogi Vsesoiuznoi perepisi naseleniia 1959 goda; Gruzinskaya SSR. Moskva, Gosstatizdat, 1963. 161 p. (MIRA 16:5)

1. Russia (1923- U.S.S.R.)TSentral'noye statisticheskoye upravleniye. 2. Chlen Kollegii TSentral'nogo statisticheskogo upravleniya SSSR, nachal'nik Upravleniya po provedeniyu Vsesoyuznoy perepisi naseleniya (Pod"yachikh). (Georgia—Census)

VOROKHOV, K.V.

Properdin titer in children with intracranial birth injury.
Pediatriia 42 no.8:74-76 Ag'63 (MIRA 17:4)

1. Iz kafedry gospital'noy pediatrii (ispolnyayushchiy obyazannosti zaveduyushchego - prof. K.F. Sokolova) II Moskovskogo meditsinskogo instituta imeni Pirogova na baze Moskovskoy detskoy bol'nitsy imeni Filatova (glavnyy vrach L.A. Vorokhobov).

FABRIKANT, V.[illegible], doktor tekhn. nauk, prof. [illegible]
(Riga)

Principles of the design of longitudinal differential protection systems for tapped lines. Elektrichestvo no. [illegible]

OREKHOV, L.G.

Diagnostic importance of colposcopy in the examination of patients with benign changes of the cervix uteri. Med. zh. Uzbek. 3:46-48 '63 (MIRA 17:2)

1. Iz rodil'nogo doma g. Chirchika (glavnyy vrach - A.M. Gladkikh, nauchnyy rukovoditel' - prof. A.A.Kogan).

MAKAROV, V.; OREKHOV, M.

The crew of the steamship "Nezhin" masters a new technique. Mor. flot. 16 no.1:27-29 Ja '56. (MLRA 9:5)

1. Inzhener SSKh Chernomorskogo parokhodstva (for Makarov);
2. Starshiy mekhanik parokhoda "Nezhin" (for Orekhov).
(Steamboats)

112-57-8-17300

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 8, pp 200-201 (USSR)

AUTHOR: Shepsenvol, M. A., and Orekhov, M. A.

TITLE: An Instrument for Measuring Static Transconductance of Receiving and Amplifying Tubes (Pribor dlya izmereniya staticheskoy krutizny priyemno-usilitel'nykh lamp)

PERIODICAL: Obmen opytom, M-vo radiotekhn. prom-sti SSSR (Experience Exchange. Ministry of the Radio-Engineering Industry, USSR), 1955, Nr 8-9, pp 68-69

ABSTRACT: Instruments used for measuring static transconductance of electron tubes have a number of disadvantages: sensitivity to power-supply noise, dependence of measurement on the wave-shape of the supply voltage, etc. A circuit diagram is presented of a device practically free from all these disadvantages. The circuit is based on the stabilization of voltage directly at the anode of the tube being tested, which insures strictly static measurement conditions. The grid driving voltage for the tube is derived from a stabilized 1,000-cps oscillator. The measuring section of

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112-57-8-17300

An Instrument for Measuring Static Transconductance...

the device comprises an amplifier, a detector, and paraphase linear amplifier. The device includes also a stabilized supply source for the anode circuit of the tube being tested.

E. A. G.

Card 2/2

ANISIMOV, S.M.; OREKHOV, M.A.

Drying granulated concentrates and sinter cake by the suction of preheated air. Izv.vys.ucheb.zav.; tsvet.met. 3 no.2:74-79 '60. (MIRA 15:4)

1. Severokavkazskiy gornometallurgicheskiy institut, kafedra metallurgii tyazhelykh metallov.
(Ore dressing) (Sintering)

L 00086-66 EWT(m)/EPF(c)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5022340 UR/0149/65/000/003/0108/0114
669.293:669.294

AUTHOR: Zelikman, A. N.; Orekhov, M. A.

TITLE: Investigation of the interaction of columbium and tantalum pentoxides with solutions of sodium hydroxde at temperatures above 100 C

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 3, 1965, 108-114

TOPIC TAGS: tantalum compound, sodium hydroxide, chemical reaction, niobium compound

ABSTRACT: Starting materials were pure columbium and tantalum pentoxides and their mixtures calcined at 900 C for six hours. The tests were made in nickel autoclaves with a capacity of 100 cm^3. In all tests, the weighed portion of pentoxide was 3 grams and the total volume of the solution was 60 ml. A study was made of the effect of temperature (150 and 200 C), concentration of the sodium hydroxide (1:1, 1:3, and 1:12), and duration of autoclave extraction (up to six hours) on the composition of the reaction products. It was found that the rate of the transition of the hexacolumbate to the metacolumbate decreased with an increase

Card 1/2

L 00086-66
ACCESSION NR: AP5022340

in the concentration of the sodium hydroxide solution. At 200C, a half hour after the temperature had been reached, the sodium hexacolumbate was completely converted into metacolumbate at a sodium hydroxide concentration of more than 2.5%. In the same way, a study was made of the interaction of tantalum pentoxide and of mixtures of the pentoxides of columbium and tantalum with solutions of sodium hydroxide. It was found that tantalum pentoxide, independent of concentration and duration of treatment with sodium hydroxide, in the temperature interval 150-200 C, forms only the anhydrous sodium metatantalate $NaTaO_3$. A mixture of the pentoxides of columbium and tantalum interacts with solutions of sodium hydroxide with the formation either of soluble columbium or tantalum salts or of anhydrous metasals. Orig. art. has: 4 figures and 3 tables

ASSOCIATION: Moskovskiy institut stali i splavov. Kafedra metallurgiy redkikh metallov i metallokeramiki (Moscow Institute for Steel and Alloys. Faculty of the Metallurgy of Rare Metals and Metal Ceramics).

SUBMITTED: 12May64 ENCL: 00 SUB CODE: IC, GC

NR REF SOV: 007 OTHER: 002

Card 2/2

ZELIKMAN, A.N. (Moskva); ORLEKHOV, M.A. (Moskva)

Decomposition of tantalite concentrates by caustic potassium and sodium solutions at high temperatures and pressures. Izv. AN SSSR. Met. no.6:38-45 N-D '65. (MIRA 19:1)

1. Submitted June 11, 1964.

[redacted]

OREKHOV, M. [D.]

PA 190T77

USSR/Medicine (Veterinary) - Haemosporidiosis Oct 51

"Contribution of the Turkmen Veterinary Experiment Station to the Great Communist Construction Work (Letter to the Editor)," M. Orekhov, Deputy Dir in Charge of Sci Matters, Turkmen Vet Sci Res Expt Sta

"Veterinariya" Vol XXVIII, No 10, pp 17-19

Discusses possibility of spread of tick-transmitted haemosporidiosis as result of importation of cattle, development of new pastures, etc., in connection with construction of the Main Turkmen Canal.

190T77

OREKHOV, M. D. (Jr. Sci. Co-Worker, Turkmen NIVOS)

Nematoda

Dipetalonemiasis in camels in Turkmenia and measures of controlling it. Veterinariia 29 no. 4, 1952.

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

OREKHOV,M.D.

Junior Science Assistant M.D.OREKHOV and G.M. Ped'ko (Turkmenistan NIVOS) authors of an article,"Enzootic Encephalomyelitis in Camels".

1.Extract: During the last few years a distinctive but completely uninvestigated disease has appeared among camels in the Turkmen SSR. In view of the fact that this unknown disease almost always ends in death and its control has been an unsolvable problem for practicing veterinary personnel, the Turkmen NIVOS set up the goal of studying this disease and finding control measures.

The Turkmen NIVOS in the person of its science assistants M.D. OREKHOV, G.M.Ped'ko, G.M. Yakunin and Ye.M. Yakunina, who had first studied the disease, diagnosed the disease as enzootic encephalomyelitis of camels because of epizootological data, symptomatology, and the pathoanatomical picture. In setting up this diagnosis, the workers of the Turkmen NIVOS were seeking through the name of the disease to define from one side the biological nature of this disease and from the other the source of infection and the degree of affection(infection?)As further study of the disease has shown,this name has been fully justified.

2. Extract: At the beginning of our study of enzootic encephalomyelitis, our first pathoanatomical diagnosis was enzootic meningoencephalitis. The diagnosis was then made more precise and confirmed by the head of the Department of Pathological Anatomy of the Turkmen Agricultural Institute, Candidate of Veterinary Science V.A.Kuznetsov.Page 27(Veterinariya,No.11,1952) SO: [redacted] U-5638;10 March 1954;p.54; [redacted] de g

OREKHOV, M. D.

"Dipetalonamiases of Camels in the Turkmenskaya SSR and Their Control." Cand Vet Sci, Moscow Technological Inst of the Meat and Dairy Industry, Min Agriculture USSR, Ashkhabad, 1954. (KL, No 1, Jan 55)

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

USSR/Diseases of Farm Animals - Diseases Caused By Helminths. R.

Abs Jour : Ref Zhur - Biol., No 6, 1958, 26328

Author : Orekhov, M.D.

Inst : Turkmen Agricultural Institute.

Title : Problems of Moniodiosis and Tisanniociosis Prophylaxis in Small Horned Stock in Conditions of the TSSR.

Orig Pub : Tr. Turkm, s.-kh. in-ta, 1956, 8, 171-175

Abstract : Examinations of soil samples in various parts of Turkmen SSR showed that oribathidae [water tick] are found in the upper fifth layer of the soil and do not creep into the deeper layers. In dandy and desert areas oribathidae do not occur. According to their bilogical characteristics oribathidae are divided into two groups. One group dwells near water springs and arrives at an active state from February to November only.

Card 1/2

OREKHOV, M. D. Cand Vet sci -- (diss) "Materials (d)] the study of dipetalonematosis in camels in the Turkmen SSR." Ash, 1957. 15 pp 20 cm. (All-Union Acad of Agr Sci im V.I. Lenin. All-Union Inst of Helmintology im Academ [illegible] K.I. Skryabin). [illegible] copies. (KL, 23-57, 115)

USSR / Diseases of Farm Animals. Diseases Caused by Helminths. R-2

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7325

Author : M. D. Orekhov,
Inst : Not Given
Title : Materials on the Study of Dipetalonematodiasis of Camels in the Turkmen SSR.

Orig Pub: Avtoref. dis. kand. vet. n. VASKhNIL, Vses. in-t gel'mintol. M 1957.

Abstract: No Abstract.

Card 1/1

ORKKHOV, M.D., nauchnyy sotrudnik; KELOV, D.N., nauchnyy sotrudnik

Epizootology of Anoplocephalata infestations of goats and sheep. Veterinariia 35 no.5:65-66 My '58. (MIRA 12:1)

1. Turkmenskiy nauchno-issledovatel'skiy institut zhivotnovodstva i veterinarii.

(Tapeworms)

OREKHOV, M.N.

Dispersion formula in standard sampling. Izv.vyz.ucheb.zav.;tekh. tekst.prom. no.5:20-28 '60. (MIRA 13:11)

1. Ivanovskiy tekstil'nyy institut imeni M.V.Frunze.
(Sampling (Statistics))

OREKHOV, M.S.

Industrial application of the MVT-35-11 tubular electrostatic precipitator. Koks i khim. no.6:45-46 '60. (MIRA 13:7)

1. Alchevskiy koksokhimicheskiy zavod.
(Coke industry--Equipment and supplies)

ORKHOV, M.V.

Results of cultivating Eucommia in Chernovitsy Province. Biul.Glav.bot. sada no.20:125-128 '55. (MLRA 8:9)

1. Botanicheskiy sad Chernovitskogo gosudarstvennogo universiteta.
(Chernovitsy Province--Eucommia)

CLEARED

AUTHORS: Vinograd, M.I. (Cand.Tech.Sc.), Chernyak, G.S. and Orekhov, N.D. (Engineers). 133-6-25/33

TITLE: The influence of technological factors of smelting and teeming of steel 1-2Kh13 on the degree to which it is affected by hair cracks. (Vliyaniye tekhnologicheskikh faktorov vyplavki i razlivki stali 1-2Kh13 na porazhennost' yeye volosovinami).

PERIODICAL: "Stal'" (Steel), 1957, No.6, pp.560-562 (USSR).

ABSTRACT: The influence of the following factors on the degree to which steel 1-2Kh13 is affected by hair cracks was investigated: a) duration of refining; b) the temperature of metal in the ladle after tapping; c) duration and method of teeming ingot moulds (bottom or top), d) the content of FeO in the tapping slag; e) the position of ingots (first and last ingots were compared); f) the position from which specimens were taken (head, middle and tail parts). Steel making practice (in 20 ton basic electric furnaces) is described. Two ingots from each heat (first and last and second and last for top poured) were tested. After rolling into square bars (90 x 90 mm) 3 templets 60-80 mm long corresponding to head, middle and tail parts of ingots were taken, cut and planed until the plane passed

Card 1/3 ... factors

The influence of technological factors of smelting and teeming of steel 1-?X13 on the degree to which it is affected by hair cracks. (Cont.) 133-6-25/33

investigated (within the limits of the practice used) had no influence on the development of hair cracks. In order to decrease the development of hair cracks, bottom pouring of a comparatively hot metal (1550-1650 C) should be used, moreover, important parts should be made from bars corresponding to the head part of ingots.

There is 1 table and ? references, both Slavic.

ASSOCIATION: "Elektrostal'" Works. (Zavod "Elektrostal'").

AVAILABLE: Library of Congress

Card 3/3

OREKHOV, N. D.

18

Influence of technological factors entering into rolling and teeming 18% Cr steel on hair-line cracking. M. I. Vinogrud, G. S. Chernyak, and N. D. Orekhov. *Stal'* 17, 940-2 (1957).—The defect is removed by bottom pouring the molds at above 1550–1650° and by using only the top portion of ingots. Finishing time, teeming time, and FeO content of the final slag have no effect. J. D. Gat

Properties of 20 KhGR steel. N. I. Letchford. *Stal'* 17, 564(1957).—This steel, contg. C 0.17–0.24, Si 0.17–0.37, Mn 0.7–1.0, Cr 0.8–1.1, B 0.001–0.005%, has in hot-rolled state 106–159 kg./sq. mm. tensile strength, 87–134 kg./sq. mm. yield point, 10–18% elongation, 51–70% reduction of area, and 8.5–15 kg.-m./sq. cm. impact strength. J. D. Gat

Orekhov, N.D

AUTHORS: Vinograd, I.I., Candidate of Technical Sciences, Lyubinskaya, M.A., Orekhov, N.D., Engineers

TITLE: Effect of Cast Refractories on Impurity Content in Ball Bearing Steel (Vliyaniye razlivochnykh ... zagryaznennost' sharikopodshipnikovoy stali)

PERIODICAL: Metallurg, 1958, Nr 2, pp 1? - 15 (USSR)

ABSTRACT: The authors describe experiments at the "Elektrostal'" Works jointly with the Moskovskiy institut stali (Moscow Steel Institute) and Vsesoyuznyy nauchno-issledovatel'skiy institut ogneuporov (All-Union Refractories Research Institute) ... sources of impurities in ball-bearing steel, their ... find the best refractories for the ladle, runners and for bottom-pouring. Engineers V.S. Nikol'skiy and V.S. ... representative of Glavogneupor, S.D. Skorokhod, participated in the work. Test refractories (properties shown in Table ... ladle and runners and in Table 3 for bottom pouring) were ... from mixes containing Ca^{45} to give 150 millicuries per ... mix. The steel was melted in 20-ton electric-arc furnaces and bottom-poured into 500-kg ingots. These were rolled and specimens were cut from the product and measured for radio-activity either by the GOST 801-47 scale or by isolating the inclusions ...

Card1/2

electrolytically. The results for ladle and runner refractories show (Table 2) that of the three types tested (fireclay, kaolin and high-alumina) the high-alumina (72 - 75% Al_2O_3, 5.6% porosity) was best. The extent of contamination was found to rise with metal temperature. For bottom-pouring refractories, little difference was observed (Table 5) between the types tested; fireclay, graphite-fireclay, kaolin, high-alumina. There are 5 tables.

ASSOCIATION: Zavod "Elektrostal'" ("Elektrostal'" Works)

AVAILABLE: Library of Congress

Card 2/2

1. Steel-Impurities 2. Ball bearings--Production

MANUKOVSKIY, N.F.; POLONETSKIY, S.D.; OREKHOV, N.I.; SYCHEV, A.F.; BOLDYREV, M.D.; SEMENOV, V.M., nauchnyy red.; KRYUCHKOV, V.L., red.; CHIRKOV, A.Ya., red.; PERSON, M.N., tekhn. red.

[Over-all mechanization of corn growing and harvesting]Kompleksnaia mekhanizatsiia vozdelyvaniia i uborki kukuruzy. Moskva, Proftekhizdat, 1962. 118 p. (MIRA 16:2)
(Corn (Maize)) (Farm mechanization)

MAN'KOV, D.F.; OREKHOV, N.I.; POLONETSKIY, S.D.; NELYUBOVA, Ye.I., red.; DUDAKOV, V.A., tekhn. red.; OKOLELOVA, Z.P., tekhn. red.

[Agricultural machines] Sel'skokhoziaistvennye mashiny. Moskva, Sel'khozizdat, 1963. 502 p. (MIRA 17:3)

OREKHOV, N.I.; MAKHLIN, Ye.A.; TARASENKO, A.P.

Performance of windrowers at increased speeds. Trakt. i sel'khozmash. 33 no.10:25-27 O '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya i Voronezhskiy sel'skokhozyaystvennyy institut.

CREKHOV, N.L.

Mechanization of processes of parkerizing rolled steel products.
Mekh.i avtom.proizv. 18 no.3:16-18 Mr '64. (MIRA 17:4)

OREKHOV, N.R., karantinnyy inspektor

Grow healthy nursery stock. Zashch.rast.ot vred. i bol. r no.4:50 Jl-Ag '59. (MIRA 16:5)

(Nursery stock--Diseases and pests)