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REEL #367

FROM: MOLOSTOV, A.S.

TO:

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOSTOV, A. S. and SHCHIGLYUK, V. M.

Molostov, A. S. and Shchiglyuk, V. M. "The effect of varying quality of the tissues of the underground portion of the hop plant on the hop harvest", Trudy Zhitomirsk. s. - kh. inta, Vol. 111, 1949, p. 37-40.

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

M-6

COUNTRY : USSR
CATEGORY :

ABS. JOUR. : RZBiol., No. 19, 1958, No. 87109

AUTHOR : Molostov, A. [illegible]; Grechanenko, A. Ya.
INST. : Zhitomir Agricultural Institute
TITLE : Experimental Production of Lupine Seed in Close-Row and Wide-Row Plantings with Application of Organo-Mineral and Mineral

ORIG. PUB. : Nauchn. tr. Zhitomirsk. S.-Kh. in-t, 1957, 4, 95-105

ABSTRACT : Experiments on production of seed of Blue Lupine 14° (Lupinus angustifolius) and of White Seed Feed Lupine (Lupinus luteus) were conducted in the Zhitomirskaya Oblast', at the collective farm "Pamyat V. I. Lenina" and the experiment station of the Agricultural Institute. Higher yields of seed were obtained with close row planting, 15 cm apart, at sowing rate: Blue Lupine 14°-160 kg/hectare, White Seed Lupine 140 kg/hectare. The absolute weight and yield of seed per single plant were higher in wide-row plantings. The most effective fertilizers were found to be powdered P_2 and high-percentage potassium salt (60 kg/hectare of active ingredient) with

CARD: 1/2

* Fertilizers (Short Communication).

65

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

Country : USSR
CATEGORY :

ABS. JOUR. : RZBiol., No. 19, 1958, No. 87109

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : Shredded peat, in a proportion of 4-5 parts by weight per 1 part by weight of mineral fertilizer.
A. A. Shchibrya.

CARD: 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOSTOV, Arkadiy Savel'yevich, prof.; BELOUSOVA, O.M., red.

[Elements of variational statistics] Elementy variatsionnoi statistiki. Kiev, Urozhai, 1965. 180 p.
(MIRA 18:5)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOSTOV, G.M., brigadir puti

Opinion of a brigade foreman. Put' i put.khoz. 6 no.5:15 '62.
(MIRA 15:4)

1. Stantsiya Salavat, Kuybyshevskoy dorogi.
(Railroads--Track)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOSTOV, N.P.

Promoting quality. Mashinostroitel' no.7:10-11 Jl '65. (MIRA 18:7)

1. Glavnyy inzhener upravleniya mashinostroitel'noy promyshlennosti Khabarovskogo soveta narodnogo khozyaystva.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

KARAMOV, V. S., inzh.; MOLOSTOV, V. F., inzh.

Aleksandr Kandalov and his crew. Transp. stroi. 13 no.4:39-40 Ap '63. (MIRA 16:4)

(Railroads—Electrification)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOSTOV, V.F., inzh.

Methods of using "windows" efficiently during the installation of a contact network. Transp. stroi. 13 no.7:7-9 Jl '63.(MIRA 16:9)
(Electric railroads--Poles and towers)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

KOSTYAKOV, V.S., insh.; MOLOSTOV, [illegible].N., insh.; NAKHALOV, V.A., insh.

Resistance of materials used for rod-type grids of MP-VTI fly-ash collectors. Elek.sta.29 no.3:86 Mr '58. (MIRA 11:5)
(Power plants--Equipment and supplies)
(Materials--Testing)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

GAYDUKOV, Vasiliy Petrovich; MOLOSTOV, V.S., insh., prepodavatel', retsenzent; MURAV'YEV, V.M., insh., retsenzent; PETROVA, Ye.A., vedushchiy red.; FEDOTOVA, I.G., tekhn.red.

[Technical calculations in petroleum production] Tekhnicheskie raschety pri ekspluatatsii neftianykh skvazhin. Moskva, Gos. nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 271 p. (MIRA 14:4)

1. Groznenskiy neftyanoy tekhnikum (for Murav'yev). (Oil reservoir engineering)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

KOZLOVSKAYA, V.P.; VASIL'YEVA, N.I.; NEPOMNYASHCHAYA, E.Z.; Prinimali uchastiye: LEONOVA, L.I.; MOLOSTOVA, I.I.; RUBLEVA, M.K.

Methods of eliminating the macrocrystalline rim in extruded products made of aluminum alloys. Alium. splavy no.3:251-262 '64. (MIRA 17:6)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOSTOVA, P.P.

MOLOSTOVA, P.P., agronom.

Obtaining 1360 centners of corn to the hectare. Kukur. i pered. op. v sel'khoz. 7 no.12:14-15 D '57. (MIRA 11:1)

1. Kolkhoz "Ural". Sosnovskiy rayon, Chelyabinskaya oblast'.
(Corn (Maize))

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

GUSEV, V.P.; FOMIN, A.V.; KUNYAVSKIY, G.M.; OBICHKIN, Yu.G.; MOLOSTOV, Yu.A.; NAZAROV, A.S.; SAKHAROV, M.A.; GREBNEV, A.K.; VARLAMOV, R.G., retsenzent; DEMBITSKIY, L.N., retsenzent; RAKOV, N.A., retsenzent; LYUBIMOVA, T.M., red.; BELYAYEVA, V.V., tekhn. red.

[Calculation of electrical tolerances in radio-electronic apparatus] Raschet elektricheskikh dopuskov radioelektronnoi apparatury. [By] V.P.Gusev i dr. Moskva, "Sovetskoe radio," 1963. 366 p. (MIRA 17:1)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

[illegible], V.[illegible], [illegible]; [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], ekonomist.

Experience in using the [illegible] [illegible] of 15-17°. [illegible] 40 no.[illegible] My '[illegible].

(MIRA [illegible])

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

KOPYTIN, V.T.; MOLOSTVOV, Ye.V.

Norms for the number of workers in the starch, carbon dioxide, biomycin and amylase production in distilleries. Ferm. i spirt. prom. 31 no.3:27-30 '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fermentnoy i spirtovoy promyshlennosti.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

HOLOSTVOV, Ye.M., uchitel'

Experiment in corn hybridization. Biol. v shkole no.2:44-46 Mr-Ap '59. (MIRA 12:4)

1. Bol'she-Yal'chikskaya srednyaya shkola, Yal'chikskogo rayona, Chuvashskoy SSR.
(Corn breeding—Study and teaching)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOSTVOV, Ye. M., zasluzhennyy uchitel'

Tomatoes without watering. IUn. nat. no.6:2-3 Je '61.
(MIRA 14:7)

1. Bol'she-Yal'chikskaya srednyaya shkola Chuvashkoy ASSR.
(Chuvashia—Plant breeding—Study and teaching)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOSTVOV, Ye.M.

Inculcating practical skills during group work.
Geog. v shkole 25 no.6:58-59 N-D '62. (MIRA 15:12)

1. Bol'she-Yal'chikskaya srednyaya shkola Chuvashskoy ASSR.

(Meteorology—Study and teaching)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

ULIYANOVA, M.P.; TOLMACHEVA, I.I.; MOLOSTVOV, Ye.V.

Change-over to the 7-hour wor. ay. Spirt.prom. 26 no.5:33-38 '60. (MIRA 13:7)
(Distilling industries) (Hours of labor)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

HOLOT, L. A. and RYAZANOV, I. P.

"A Colorimetric Determination of Iron with Benzohydroxamic Acid," Zavodskaya Laboratoriya, No. 3, Vol. 18, pp 271-272, 1952.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOT, L. A.

Reject

Journal of the American
Ceramic Society
Vol. 37 No. 5
May 1, 1954
Cements, Limes, and Plasters

③ 71-41

Rapid method for the determination of aluminum in cements. L. M. KUL'PERS, N. V. CHUGREEVA, AND L. A. MOLOT. *Tsement*, 18 [6] 21-23 (1952).—The Fe^{3+} is reduced to Fe^{2+} in the solution, pH is adjusted at 4.4, Aluminon is added, and comparison is made with standard solutions of $CoCl_2 \cdot 6H_2O$. A photometer can also be used. Two variations are described. In one, which is suitable for the complete analysis of cement, the sample is treated with HCl, SiO_2 is filtered off, and Fe and Al are determined in the filtrate. In the second, it is not necessary to remove the hydroxides first. Results of three analyses show deviations of −0.11 to +0.03% from the gravimetric method. B. Z. K.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOT, L. A.

Persulfate-phalt method for determining manganese and chromium in steels and iron in one sample. L. M. Kul'berg, L. A. Molot, and L. P. Grigor'eva (N. G. Chernyshevskii Univ., Saratov). *Zhur. Anal. Khim.* 8, 370-2 (1953).—In *C.A.* 47, 4788*d* a method was examd. for its accuracy and suitability for control labs. Best results were obtained with a Co-Ni or Co-Cu catalyst. The method was found suitable also for detg. Cr. M. Hosch

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

Molot, L.A.

USSR

Control of manufacture of hydrogenated fats. L. N. Kul'berg, T. I. Radzeva, L. A. Molot, and N. S. Trunina (Gosis Univ., Saratov). Zhurnal Prikl. Khim. 20, No. 1, 10-3 (1947).—Photometric detn. of Ni (in hydrogenated fat): 2 g. of sample dissolved in 10-15 ml. of a suitable solvent in a separatory funnel is shaken for 5 min. with 10 ml. of HCl (1:4) at 70-80° and sepd., and the aq. layer is filtered. A 2-ml. aliquot in a 10-ml. graduated test tube is treated with 3 drops satd. Rochelle salt soln., 3 ml. of 10% NaOH soln., and 2 ml. of 1% dimethylglyoxime in 5% NaOH soln. The mixt. is made up to 10 ml. vol. with 3% $(NH_4)_2S_2O_8$ soln., throughly shaken, and after 5-7 min. the color intensity of the soln. is measured with photometer at 470 mμ. This colorimetric method is simplified by use of a series of standards contg. 3-15 γ of Ni and 0.02 ml. of each 0.5M $Co(NO_3)_2$ and 0.1N $K_2Cr_2O_7$ made up to 10 ml. vol. with distd. water. Both methods agree, within expt. error, with the known gravimetric method. Determination of Ni in the presence of Fe and Cu: A procedure for Ni-Fe-Cu hydrogenation catalyst is based on titration of Fe with $KMnO_4$, detn. of Cu iodometrically, and detn. of Ni by titration with Ni dimethylglyoxime soln. Titer of 1% hydrogenated fat: Approx. 0 g. of hydrogenated fat (free of typical fatty acids) in a 100-ml. Erlenmeyer flask is sapond. with 5 ml. of EtOH and 5 ml. of NaOH soln. (sp. gr. 1.32), dissolved in 8 ml. of warm EtOH, and the fatty acids are set free by addn. of 8 ml. 25% H_2SO_4. The acids are sepd., washed with hot water until washing is neutral, partially dried at 105°, filtered into a test tube, and fully dried at 105°. The titer is then detd. by the use of Dewar's app. following the standard procedure.

Vladimir N. Krukovsky

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

Molot, L. A.

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 116 - 20/24

Authors : Kul'borg, L. M., and Molot, L. A.

Title : Alumocresson - an improved reagent of the aluminon type

Periodical : Ukr. khim. zhur. 21/2, 256-260, 1955

Abstract : The introduction of a new aluminon type reagent - alumocresson - is briefly announced. O-cresotic acid, formalin and ammonia were the basic substances used in the synthesis of the new reagent. The properties of alumocresson are described. It is shown that this reagent can be utilized for sensitive qualitative reactions for Al^{III}, Fe^{III}, Ga^{III}, Ba^{III}, UO_2^{II} and $PtCl_6^{II}$. Alumocresson was found to be more sensitive than aluminon especially during quantitative determination of Al, Fe and Ga traces. Tables; graphs.

Institution : The N. G. Chernishevskiy State University, Faculty of Anal. Chem. Saratov

Submitted : May 29, 1954

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

Molot, L.A.

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 116 - 18/19

Authors : Kul'berg, L. M.; Molot, L. A.; and Mustafin, I. S.

Title : Effect of internal hydrogen bond on the properties of organic analytical reagents

Periodical : Ukr. khim. zhur. 21/6, 766-772, Dec 1955

Abstract : Experiments were conducted with various organic analytical reagents to determine the effect of an internal hydrogen bond on their characteristics. An analysis of results shows that the presence of an internal hydrogen bond in a molecule of analytical form leads to a considerable increase in the sensitivity of the reaction resulting in the formation of intracomplex salts. Nine references: 8 USSR and 1 USA (1937-1952). Tables.

Institution : Saratov State University, Dept. of Anal. Chem.

Submitted : July 5, 1955

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

Distr: [illegible]

1 Simultaneous determination of iron and aluminum by aluminum. L. A. Mojot and L. M. Gulberg. Ukraine Zapiski Sarat. Gos. 37, 70-[illegible] Zhur., Khim. 1958, Abstr. No. 38155. The applicability of the color reaction of Fe and Al with aluminum (I) for the colorimetric dern. of the sum of these elements was studied. The absorption spectra of dye lakes of Al and Fe at pH 4.87 (biphthalate buffer) were measured. It is recommended that the detn. be done at 530 mμ. Calibration curves for the lakes of both elements in the acetate and biphthalate buffers (pH 4.40 and 4.87, resp.) were plotted. The curves are close together and cross each other when biphthalate buffer is used. The max. Al + Fe can be detd. from the Al curve or from the Fe crossing both curves and originating from the point, corresponding to the measured extinction and parallel to the abscissa. The following analysis method was proposed: dil. the sample with buffer soln. to 5 ml., add 0.1 ml. of soln. I (concn. 5 mg./ml.) and take measurements 10 or 5 min. after mixing. Fe is detd. by the thiocyanate method. The method was used on artificial mixts. and applied to the analysis of water, lime and SiO_2 gels, satisfactory results were obtained. 16 V. S. Mikajlov

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOT, L.A.; KUL'BEKO, L.M. [deceased]

Use of aurintricarboxylic acid in analysis. Zhur.anal.khim. 11 no.2:198-204 Mr-Ap '56. (MLRA 9:8)

1. Saratovskiy gosudarstvennyy universitet imeni N.G. Chernyshevskogo.
(Aurintricarboxylic acid) (Chemical tests and reagents)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

Molot, L. A.

15-57-5-6332

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5, p 93 (USSR)

AUTHORS: Kul'berg, L. M., Chugreyeva, N. V. Molot, L. A.

TITLE: The Determination of Aluminum in Natural Waters by the Aluminon (?) Method (K opredeleniyu alyuminiya v prirodnykh vodakh alyuminonovym metodom)

PERIODICAL: Uch. zap. Saratovsk. un-ta, 1956, Vol 43, pp 131-134

ABSTRACT: The method developed by the authors is described. One hundred milliliters of water are acidified by one milliliter of H_2SO_4 and are passed in small portions through a cadmium reductor. The first portion of the filtrate is discarded and the remainder is collected in a dry flask or vial. To a milliliters of "reducing" water (a is about 0.2 ml to 1.0 ml), an acetate buffer solution (with a pH of 4.4) and 0.1 ml of 0.5 percent solution of aluminon is mixed to form a volume of 10 ml. After the solution has stood for ten minutes, the optical density of the solution of lacquer is measured

Card 1/2

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

15-57-5-6332

The Determination of Aluminum in Natural Waters (Cont.)

on an FM photometer using a light filter of $\lambda = 530$ mμ in a vessel having a diameter of 10 mm. The content of Al is found by a computed curve made from data taken under identical conditions.

Card 2/2

K. N. R.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

AUTHORS: Mustafin, I. S., Kolot, L. A. SOV/153-2-4-5/32

TITLE: Indicators With Internal Light Filters. II. Trilonometrical Determination of Sulfates With an Indicator on the Basis of Sodium Rhodisonate

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 4, pp 495 - 497 (USSR)

ABSTRACT: The authors give an introductory survey and criticism of the methods of complexometrical determination of sulfates (Refs 1-18). Sodium rhodisonate, which had been suggested as a reagent for barium long ago, was also investigated as the indicator of direct and indirect determination of sulfates (Refs 10-18). With regard to the discernibility of the normal eye, the yellow-red change in the coloring at this titration is not satisfactory. At the same time, the contrasts of this change can be increased on account of the laws of colorostatics. If blue dye, which does not change during the analytical reaction, is added to a sodium-rhodisonate solution at pH 10, the solution will turn green following the rule of color mixing. If barium ions are added, the solution will turn violet. This color change is visually more distinct than the change yellow → red. After trying

Card 1/3

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

Indicators With Internal Light Filters. II. Trilonometrical Determination of Sulfates With an Indicator on the Basis of Sodium Rhodisonate SOV/153-2-4-5/32

several blue dyes the authors chose the dye "Bluer for Caprone" (see Diagram) as internal light filter for sodium rhodisonate. Figure 1 shows its light-absorption curve at pH 10. Its character does not change in the range of pH 2-11. The sensitivity of the indicator with a light filter against barium does not differ from that of the initial rhodisonate. Practically, the indicator shows no alcohol-, salt-, and protein error. An indirect trilonometrical determination of sulfates from pure solutions can be carried out by precipitating by means of an excess of titrated barium-chloride solution at low temperatures. Table 1 shows data on a volume determination of sulfates in pure solutions with the use of an indicator with a light filter. Hence it appears that the manipulation described is satisfactory with regard to accuracy and reproducibility. Naturally, the sulfate determination is disturbed by cations which interact with rhodisonate in titrations: magnesium, alkaline earths, iron, nickel, cobalt, copper, zinc, and several others. Therefore, the solution has to be cationized, if necessary. Table 2 shows the results of such an operation. V. N. Lenskaya obtained cationite, K. P. Petrikova

Card 2/3

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

Indicators With Internal Light Filters. II. Trilonometrical Determination of Sulfates With an Indicator on the Basis of Sodium Rhodisonate SOV/153-2-4-5/32

participated in the analytical work. The sufficient agreement of the results with those obtained by other methods proves the quality of the method described here. There are 1 figure, 2 tables, and 18 references, 6 of which are Soviet.

ASSOCIATION: Saratovskiy gosudarstvennyy universitet, Kafedra analiticheskoy khimii (Saratov State University, Chair of Analytical Chemistry)

SUBMITTED: May 12, 1958

Card 3/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOT, L.A.; MUSTAFIN, I.S.; FRUMKINA, M.S.

Comparison of the methods of determining trace amounts of aluminum with organic reagents. Trudy kom. anal. khim. 11:231-242 '60. (MIRA 13:10)

1. Nauchno-issledovatel'skiy institut khimii pri Saratovskom gosudarstvennom universitete.
(Aluminum--Analysis)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

LISENKO, N. F.; MUSTAFIN, I. S.; MOLOT, L. A.

Chromoxane Violet P, a reagent for a total or separate determination of microgram quantities of aluminum and iron. Part 1: Determination of aluminum and iron in natural waters. Izv. vys. ucheb. zav.; khim. i khim. tekh. 5 no.5:712-716 '62. (MIRA 16:1)

1. Saratovskiy gosudarstvennyy universitet imeni N. G. Chernyshevskogo, kafedra analiticheskoy khimii.

(Aluminum—Analysis) (Iron—Analysis)
(Water—Analysis)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOT, L.A.; FRUMINA, N.S.

Determination of beryllium traces in a mixture of calcium, strontium, and barium carbonates. Uch.zap. SGU 75:90-95 '62. (MIRA 17:3)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

BADAYEVA, T.I.; MOLOT, L.A.; FROLOVA, N.S.; PETRIKOVA, K.G.

Rapid methods for determining aluminum, iron, and calcium in slimes. Uch.zap. SGU 75:100-102 '62. (MIRA 17:3)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTAYEV, V.I., gornyy inzh.; KARTASHEV, Yu.V., gornyy inzh.; [illegible], G.N., gornyy inzh.

Control of switches with the help of RID-5B magnetic transducers. Gor. zhur. no.7:67-68 Jl '65. (MIRA 18:8)

1. Vostochnyy nauchno-issledovatel'skiy gornorudnyy institut, Novokuznetsk.

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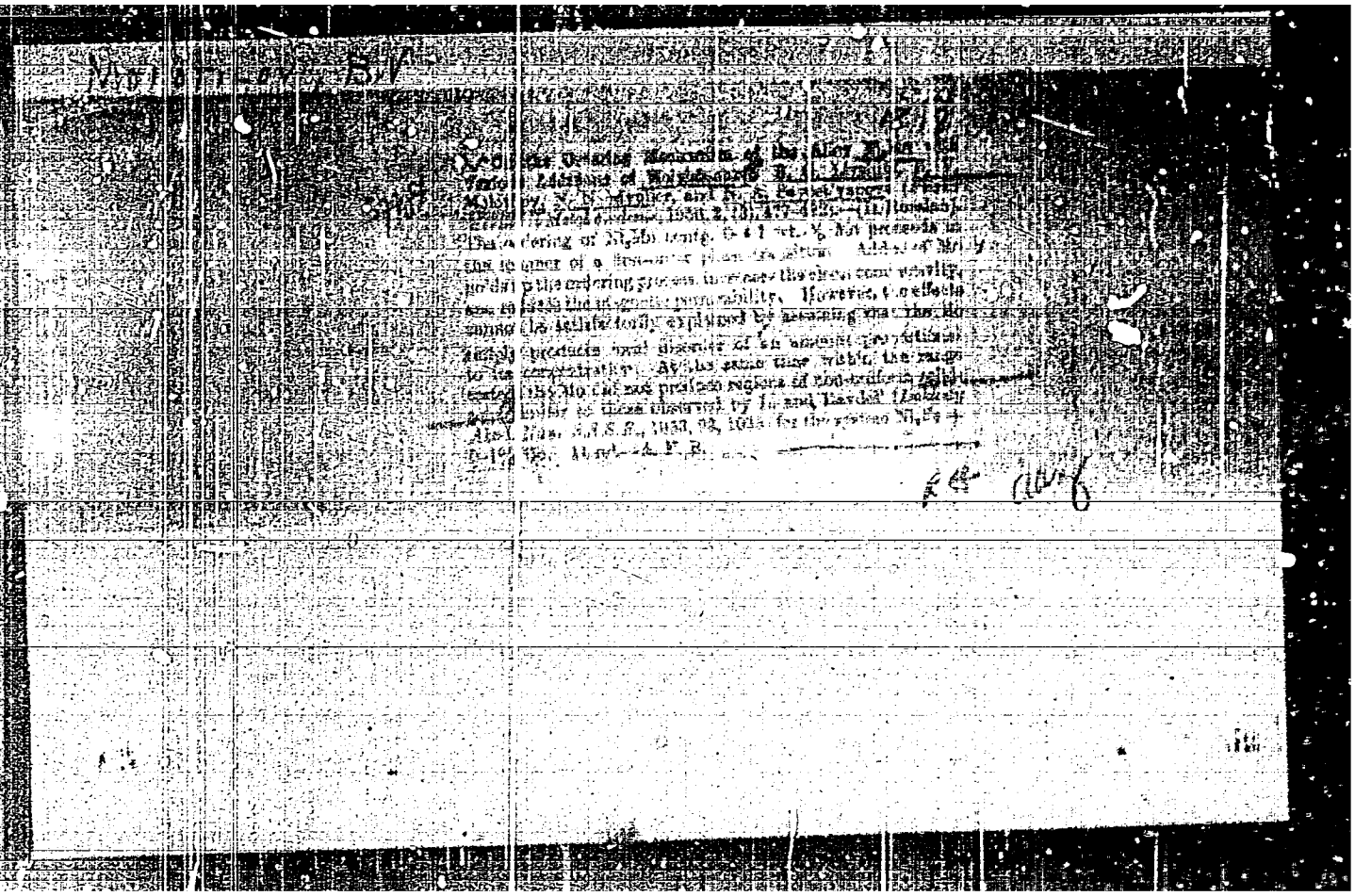

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B. V.

48-9-5/26

AUTHORS: Livshits, B. G., and Molotilov, B. V.

TITLE: Note on Magnetic Investigations of the Ordering of Alloys on the Basis of Ni_3Mn (Magnitnoye issledovaniye uporyadocheniya splavov na osnove Ni_3Mn).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1957, Vol. 21, Nr 9, pp. 1233-1233 (USSR.).

ABSTRACT: The purpose of this paper was to clarify the influence of Mo on the ordering process of the Ni_3Mn solution. Alloys of Ni_3Mn without molybdenum and such with a molybdenum content up to 4% were investigated. First the kinetics of the phase transformation at various temperatures were studied by means of measuring the electric resistance and then this process was analyzed exactly with the thermomagnetic method in the anisometer of Akulov. Moreover, the elastic properties and the structure of the alloys was investigated. It appeared, that the various stages of ordering are accompanied by a process of formation and growth of the crystal nuclei of the ordered solution and a gradual disappearance of the disordered phase. The introduction of molybdenum into Ni_3Mn slows down the ordering and diminishes the degree of the possible ordering. This decrease is not proportional to the

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Note on Magnetic Investigations of the Ordering of Alloys on the Basis of Ni_3Mn. 48-9-5/26

dilution of Ni_3Mn by molybdenum. The decrease of the extreme order apparently is not only due to a distortion of the stoechiometrical composition, but also to a basic modification of the interatomic combination. The ability of the solid solution for ordering is kept at an introduction of at least 4,1% of molybdenum and no transition to the inhomogeneous solid solution takes place (K - state). The kinetics of the ordering of Ni_3Mn compounds are identical wether alloyed with molybdenum or not. The basic contents of the lecture have been published together with Kryukler, N. N. and Savost'yanova in FMM, 3, 477 (1956).

ASSOCIATION: Moscow Institute for Steel imeni I. V. Stalin (Moskovskiy institut stali imeni I. V. Stalina).

AVAILABLE: Library of Congress.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

SOV/48-22-10-15/25

AUTHORS: Puzey, I. M., Molotilov, B. V.

TITLE: Magnetostriction in Nickel-Iron-Molybdenum Alloys (Magnitostriktsiya splavov nikel'-zhelezo-molibden)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958 Vol 22, Nr 10, pp 1244 - 1250 (USSR)

ABSTRACT: In the present paper the authors investigated the magnetostriction in nickel-iron-molybdenum alloys in relation to the coordination and the temperature. Measurements on polycrystalline samples showed that the zero line after protracted annealing is displaced by the coordination by not more than 1% towards nickel. More complete data on the properties of the magnetostriction may be obtained from measurements on monocrystals. Also in this case a displacement of the zero lines takes place. Vonsovskiy (Ref 4) showed that because of an interaction of different atoms constants may occur in an alloy, the signs of which are independent of the alloy components. The zero lines of polycrystalline alloys (Fig 4) are located as expected between the zero lines of the constants. The zero lines $\lambda_{100} = 0$ and $\lambda_{111} = 0$ in the concentration triangle

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Ni-Fe-Mo permit the exact definition of the position of the μ-domain. The schematic representation of the μ-domain can be seen in figure 2, the accurate one in figure 5. All compositions of the alloys belonging to this domain exhibit physical constants that are suitable for attaining a good permeability. Measurements of the magnetic properties showed that in alloys of the μ-domain they are by about one and a half times larger than in Mo-permalloy. In spite of the small magnetostriction of the examined alloys (of the order 10^{-6}) the investigations of their temperature dependence was successful. The temperature dependence of the magnetostrictive parameters of monocrystals is analogous to that one of polycrystals (Table 3). A temperature increase causes a monotonous decrease of the magnetostriction of the monocrystals as well as of the polycrystals. In the examined alloys a change of the sign could not be observed although the alloys were in the concentration range of the zero values of the magnetostriction. Referring to the paper mentioned in reference 4 a change of the sign of the magnetostrictive constants with varying temperature could be expected if the signs of the constants of the components and

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of the alloy and the time course of temperature with respect to time are different. At higher temperatures the temperature dependence of magnetostriction of the alloys seems to be governed by the law by Akulov (Ref 1):

$$\lambda_{sT} = \lambda_{so}\left(1 - \frac{T}{\theta}\right)$$

θ denotes the Curie (Kyuri) temperature.
In the data found a certain deviation from the linearity is explained by the process of coordination taking place during the measurements at elevated temperatures. There are 5 figures, 3 tables, and 6 references, 5 of which are Soviet.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

SOV/48-22-10-16/23

AUTHORS: Puzey, I. M., Kolotilov, B. V., Rad'kov, A. I.

TITLE: On Volumetrical Magnetostriction in Iron-Nickel-Molybdenum-Alloys (Ob"yemnaya magnitostriktsiya splavov zhelezo-nikel-molibden)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958, Vol 22, Nr 10, pp 1251 - 1253 (USSR)

ABSTRACT: A description of various devices used for the following work is to be found in reference 1. Special attention has been paid to the observation of isothermic conditions during the tests. The adiabatic process of magnetisation is known to hinder any adequate measuring of magnetostriction, chiefly owing to the magnetocaloric effect. Nickel has a negative volumetrical magnetostriction, so that its derivative $\partial A/\partial \omega$ is negative too. Thus some amount of nickel should be found on the descending branch of the Bethe curve. (Bete). Any reduction of the intermolecular distance should increase the Curie (Kyuri) point, especially if the average value of

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On Volumetrical Magnetostriction in Iron-Nickel-Molybdenum-Alloys SOV/48-22-10-16/23

the variable integral is thereby increasing. That conclusion is corroborated by the measures of the displacement of the Curie point with pressure (Ref 5). Iron has a positive isotheric volumetric magnetostriction, so that iron should be found on the ascending branch of the Bethe curve. After such a coordination some alloys changed the index of volumetrical magnetostriction (alloy 86) or magnetostriction became neutral (alloys 88, 89, 90). Obviously those alloys should be found in the maximum area of the Bethe curve. Alloys involving a (modified) index in connection with thermal work should be found near the zero lines of the linear magnetostriction (Ref 1). Molybdenum-permalloy lies away from those lines. Its index of volumetrical magnetostriction remains unchanged. Furthermore the magnetostriction scarcely changes its magnitude in passing from the tempered to the annealed state. There are 3 figures, 1 table, and 5 references, 2 of which are Soviet.

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On Volumetrical Magnetostriction in Iron-Nickel-Molybdenum-Alloys SOV/48-22-10-16/23

ASSOCIATION: Institut pretsizionnykh splavov TsNIIChERMET (Institute for Precision Alloys of the Central Scientific Research Institute for Ferrous Metals)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

SOTILOV, B.V.

Some remarks on the Standards and Technical Specifications 127-55. Gen., fund. i mekh. grun. no.4:15-16 '59. (MIRA 12:10)
(Foundations) (Soil mechanics)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

SOV/126-8-3-25/33

AUTHOR: Kolotilov, B.V.

TITLE: Polygonalization Structure of Iron-Aluminium Alloy

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, pp 463-465 (USSR)

ABSTRACT: The author has studied the structure of the high-permeability alloy of iron with 16% Al. After slow cooling of the hot-rolled alloy over the range 980 to 590°C and rapid quenching from 590°C the alloy had a maximum magnetic permeability of 71000 gauss/oersted. Fig 1 shows a typical grain microstructure in a plane close to (111) while Fig 2 shows a portion of the same structure near the grain boundary at a higher magnification. The grains are seen to be split into blocks 0.01 to 0.05 mm with straight boundaries of etch-points at definite intervals - a type of structure described for other systems (Ref 1,2). The author attributes this to dislocation effects. Slight plastic deformation by tension produced slip lines which passed through block boundaries without any breaks. There are 3 figures and 4 references, 2 of which are Soviet and 2 English.

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SOV/126-8-3-25/33

Polygonalization Structure of Iron-Aluminium Alloy

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific-Research Institute of Ferrous Metallurgy)

SUBMITTED: March 16, 1959

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27556
S/137/61/000/009/038/087
A060/A101

24.2300

AUTHORS: Fuzey, I.M., Molotilov, B.V.

TITLE: Magnetostriction of nickel-iron-molybdenum alloys

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 9, 1961, 11, abstract 9Zh64 ("Sb. tr. Tsentr. n.-i. in-t chernoy metallurgii", 1960, no. 23, 150 - 160).

TEXT: The magnetostriction of Ni-Fe-Mo alloys is investigated as a function of ordering and temperature. The measurement of magnetostriction was carried out by the bridge method. Tensometers were connected in all four arms of the bridge (two of them working, two for compensation). The working tensometers were glued onto different sides of the specimen. The magnetostriction was measured in the electromagnet ИПС-1 (IPS-1) in fields up to 17,000 oersteds. Both polycrystalline and monocrystalline specimens of alloys obtained in vacuum from the melt were investigated. It was established that the ordering leads to the displacement of the zero line ($\lambda = 0$) towards the Ni side, but no more than 1%. The magnetostriction constants of four single crystals having compositions close to the zero values of magnetostriction are cited. In the case of single crystals

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Magnetostriction of nickel-iron-molybdenum alloys

the displacement of the zero line also takes place. The construction of the zero lines $\lambda_{100} = 0$ and $\lambda_{111} = 0$ on the phase Ni-Fe-Mo triangle makes it possible to make the μ-region more precise. All alloys the compositions of which lie in that region have physical constants such as to favor the obtaining of a high permeability. Despite the low value of magnetostriction of the alloys investigated ($\sim 10^{-6}$), it was possible to investigate its temperature dependence. For poly- and mono-crystalline specimens magnetostriction decreases monotonously as the temperature increases.

A. Rusakov

[Abstracter's note: Complete translation]

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APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B.V.; PUZNI, I.M.; RAD'KOV, A.I.

Magnetostriction by change in volume of iron-nickel-molybdenum alloys. Sbor.trud.TSNIICHM no.23:161-165 '60. (MIRA 13:7)

(Iron-nickel-molybdenum alloys--Magnetic properties)
(Magnetostriction)

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26579
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E111/E335

24.2200

AUTHORS: Molotilov, B.V., Engineer and Golikov, I.N., Doctor of Technical Sciences

TITLE: Influence of Non-metallic Inclusions on the Structure of Magnetically-soft Materials

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No. 8, pp. 46 - 51

TEXT: The presence of nonmetallic inclusions or other finely-dispersed phases in alloys leads to considerable reduction in permeability and an increase in the coercive force. Kondorskiy (Ref. 4 - Dokl. Ak. nauk SSSR, Vol. 63, 1948) has linked coercive force with the number and size of nonmetallic inclusions and it has been shown (Ref. 5 - Ya.S. Shur, V.R. Abel's - Fizika metallov i metallovedeniye, 1955, Vol. 1, No. 1) that the inclusions "fix" domain boundaries, whose further movement then requires additional energy. The authors have investigated some new cases of interaction between inclusions and domain structure of magnetically-soft materials consisting of iron-silicon alloys with the following final

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E111/E335

Influence of ....

range of impurities: 0.005-0.010% C, 0.05 - 0.07% Mn, 0.007-0.015% S, 0.002-0.004% P, 0.16-0.18% Cu, 0.01-0.03% Al and traces Cr. The alloys were induction-melted from commercial-purity iron and crystalline silicon. The ingots were forged and then rolled (500 °C) to a thickness of 0.35 mm. Heat-treatment consisted of vacuum-annealing at 1 100 °C for 4 hours and cooling at 50 °C/hour. The silicon contents and magnetic properties (after heat-treatment) are shown in the table. The domain structure was observed by the magnetic-suspension method (Ref. 6 - W. Elmore - Phys. Rev., 1938, Vol. 54) on 10-12 mm diameter discs cut from coarse grains whose surface coincided to an accuracy of 2-3° with the (110) plane. With alloys having up to and including 7.0% Si, the zone disturbed by inclusions had the form of two triangles lying on either side of the inclusion along the direction of easy magnetization; with the 7.5% Si alloy the triangles are perpendicular to this direction. Numerous observations convinced the authors that the inclusions are surrounded by a strained zone due to a difference in the values of the coefficient of expansion; the stresses on

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E111/E335

Influence of ....

the metal can be calculated (Ref. 11 - L.S. Moroz - Strengthening of carbon-free Iron Alloys During Phase Transformation. Metallurgizdat, 1951)
with the aid of a simple model and, knowing the order of magnitude of the critical value of the stress for domain-structure rearrangement, the size of the zone can be estimated. For the alloys with positive magnetostriction the "spoilt" magnetic structure must lie along the [100] direction of the crystal (Fig. 4, lefthand side); for the alloy with negative magnetostriction the regions of stable and unstable structure are reversed (Fig. 4, righthand side). A more accurate calculation, allowing for the influence of the elastic field of the inclusions on the ferromagnetic, gives a more exact picture of the geometry of the disturbed zone; this agrees well with the observed effects. The calculations and experiments show the harmful effect in magnetic alloys of nonmetallic inclusions, which affect a zone 500 times and over their own size. The critical quantity of inclusions at which the whole alloy becomes magnetically "spoilt" is

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E111/E335

Influence of ....

approximately equal to the ratio of the volumes of the metal and that of the average disturbed zone.
There are 5 figures, 1 table and 12 references: 10 Soviet and 2 non-Soviet. The two English-language references quoted are: Ref. 6 (in text) and Ref. 9 - H.J. Williams and W. Shockley - Phys. Rev., 1949, Vol. 75.

ASSOCIATION: TsNIIChM

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

S/048/61/025/012/021/022
B125/B112

AUTHORS: Fedotov, L. N., Popova, V. P., and Molotilov, B. V.

TITLE: Influence of mechanical action on the magnetic structure and on the properties of alloys

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 12, 1961, 1518-1523

TEXT: The influence of mechanical stresses and the conditions of stabilization of the magnetic properties are studied. According to Ye. I. Kondorskiy (Zh. eksperim. i teor. fiz., 37, 1110 (1959)) the degree of the stability of magnetization of a ferromagnetic, placed in a field of elastic stresses, can be changed by choosing an adequate magnetizing procedure. The influence of compressing stresses directed perpendicular to the magnetic flux on the permeability in different fields in case of magnetization on the principal curve and on the ideal curve of the alloys 79НМА (79NMA) and 76НХА (76NKhD) (magnetostriction $\lambda_s \sim 0.2 \cdot 10^{-6}$) was studied. The boundaries of the principal domains are less displaced under the action of external stresses than the boundaries of subdomains and of additional

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B125/B112

Influence of mechanical action ...

domains. Simplifying the magnetic structure (by adequate processing) of an alloy by converting it completely into 180°-domains, increases the stability of the magnetic properties, impair, however, the quality. Simplifying the magnetic structure can most easily be achieved by diminishing the thickness of the material. Since the internal field acting on the 180°-boundaries is equal to zero, the 180°-boundaries are much less displaced by elastic stresses than the 90°-boundaries. In searching magnetically stable materials, special attention should be paid to such materials as have a suitable optimum amount of defects. The alloys tending to brittleness (such as iron with high silicon content, iron containing 14% Al and iron alloyed with Si and Ni) are magnetically more stable. Magnetic stability may be diminished by inclusions acting as stress concentrators. Due to considerable irreversibility, the fixation of the 180°-boundaries of the domains by inclusions must be avoided in plastic alloys and is applicable only in case of brittle alloys. The dependance of the a-c resistance on alloys 68H (68N), 79NMA, subjected to thermal pre-treatment in vacuum, and on an alloy containing 79% Ni, 5% Re, 16% Fe has also been determined by the method assumed by the authors' Institute to be the optimum method. The resistivity of alloyed specimens

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containing rhenium and the alloy 68N were most dependent on stresses. $\Delta R/R \approx 15\%$, for $\sigma = 7$ kg mm^{-2}. The rhenium-containing alloy has the following advantages: (1) Its higher resistivity, (2) in the interval 1 to 8 kg mm^{-2} its active resistivity is a linear function of load. In rhenium-containing alloys, the galvanoelastic effect is stronger than in molybdenum-containing alloys (79NMA). The sensitivity of the strain gage constructed from rhenium-containing alloys is expected to exceed that of strain gages made from Constantan alloys by two orders of magnitude. There are 8 figures and 3 Soviet references.

ASSOCIATION: Institut pretsizionnykh splavov TsNIIChermet (Institute of Precision Alloys of the TsNIIChermet)

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B104/B201

18.8200 1045 1413 1808

AUTHORS: Molotilov, B. V., and Osip'yan, Yu. A.

TITLE: Anomaly of the modulus of elasticity and domain structure of nickel

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 5, 1961, 1095-1097

TEXT: G. V. Kurdyumov et al. (DAN, 124, 76 (1959); DAN, 129, 550 (1959)) had earlier studied the effect of a heat treatment upon the temperature dependence of the modulus of elasticity of nickel and one-phase nickel alloys. The remarkable growth of the modulus of elasticity of nickel and its alloys was found to be accompanied by the appearance of slip bands on polished surfaces of the test specimens. This circumstance pointed to the relationship between this anomaly and the effect of lattice defects, appearing in the hardening process, upon the magnetostrictive part of elastic deformation. An inhibition of the boundaries of ferromagnetic domains by the defects is therefore expected to lead to a diminution of the contribution of magnetostrictive deformations to the general deforma-

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B104/B201

Anomaly of the modulus of elasticity ...

tion, whereby the modulus of elasticity is caused to grow. The authors examined the change of the magnetic state of a crystal after hardening by directly observing its magnetic structure. A nickel single-crystal was bred in a furnace by crystallization; electrolytic nickel was used for the purpose. In parallel to the (111) plane, disk-shaped samples were cut out of the single crystal. The sample surfaces were polished, the samples were then annealed, and subsequently again polished electrolytically, with less than 0.02μ being removed in the process. The magnetic structure was observed with the aid of a suspension. A relief then appeared on the polished surfaces after 500°C hardening. Two systems of slip bands enclosing a reciprocal angle of 57° could be established. Bands with a greater deposition of the suspended substance enclosed many "mosaic" domains which are typical of a nickel crystal in the stressed state and which were also observed by other author on mechanically polished nickel samples. If an outer magnetic field is applied, the bands with a greater deposition oppose a strong resistance to a shift of their boundaries. It is said to be evident that these processes take place also if no magnetic field, but an external elastic stress is applied. These bands with a greater deposition are no ordinary domain boundaries, but

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B104/B201

Anomaly of the modulus of elasticity ...

are disturbances of the crystal lattice. These disturbances of the crystal lattice in the slip bands lead to the formation of magnetic poles, the strength of which can be estimated from the magnitude of residual stresses. With reference to a paper by Ch. Kittel (Rev. Mod. Phys., 21, 541 (1949)) the effective permeability of a ferromagnetic substance in the disturbed region is discussed. The effective anisotropy constant of deformed nickel is regarded as being essentially determined by the magnetic energy. In this case, an amount of 30 - 50 kg/mm^2 is obtained for the residual stress. There are 4 figures and 7 references: 3 Soviet and 4 non-Soviet. The two most important references to English-language publications read as follows: S. Siegel et al., Phys. Rev., 49, 663 (1936); W. Elmore, Phys. Rev., 54, 309 (1938).

ASSOCIATION: Institut metallovedeniya i fiziki metallov Tsentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii im. I. P. Bardina (Institute of Metal Science and Physics of Metals of the Central Scientific Research Institute of Siderurgy imeni I. P. Bardin)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

S/129/62/000/006/001/008
E073/E455

AUTHOR: Molotilov, B.V., Engineer

TITLE: Carbon in iron-aluminium magnetically soft alloys

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no.6, 1962, 2-5 + 1 plate

TEXT: Data are given on the influence of carbon on the magnetic properties of an alloy of composition: 16 to 16.1% Al; 0.18 to 0.21% Si; 0.045 to 0.05% Mn, 0.0035 to 0.004% S; 0.002% P; 0.01 to 0.04% Al_2O_3; 0.01 to 0.5% C. The alloy was smelted in a 60 kg induction furnace with a magnesite crucible, cast into ingots which were rolled at 1100 to 1200°C into 2 mm thick strip and then, at 650°C, into 0.35 mm thick strip. Heat treatment after the final rolling: heating to 1100°C for one hour, cooling at a rate of 15°C/hour to 590°C, followed by quenching in a 25% solution of NaOH. The grain size was uniform, equalling 0.4 to 0.5 mm. Carbon was found to reduce considerably the permeability (Fig.1). If the carbon content is in excess of 0.02% the maximum permeability cannot exceed 100000 Gauss/Oe. Due to the negligible solubility of carbon at

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Kurnakov point temperatures, alloys containing over 0.026% C have a second ferromagnetic phase. The rejection of this phase is accompanied by phase hardening. The assumption is expressed that the drop in the magnetic properties is due to the presence of rejections and stresses caused by phase hardening. There are 4 figures.

ASSOCIATION: TsNIIChM

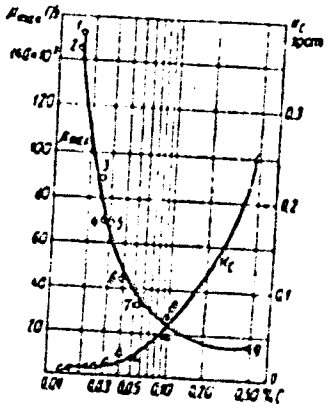

Fig.1. Influence of the carbon content on the maximum permeability μ_{max}(Gauss/Oe) and the coercive force H_c (Oe) of iron-16% Al alloy (the numbers at the measuring points - serial numbers of the alloys).

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B.V.

Structure of "adaptation zones" near low-temperature twins in a ferrosilicon alloy. Kristallografiia 7 no.2:252-256 Mr-Ap '62. (MIRA 15:4)

1. Institut pretsizionnykh splavov TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii imeni I.P.Bardina.
(Ferrosilicon alloys) (Crystallography)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

GOLIKOV, I.N., doktor tekhn.nauk, prof.; MOLOTILOV, B.V., inzh.

Domain and dislocation structures in transformer steel. Metalloved. i term. obr. met. no.12:21-23 D '62. (MIRA 16:1)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Steel—Metallography) (Domain structure)
(Dislocations in metals)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

36602
S/126/62/013/003/018/023
E193/E383

18.1170

AUTHOR: Molotilov, B.V.

TITLE: Nonuniform distribution of carbon in Fe-Al-C alloys

PERIODICAL: Fizika metallov i metallovedeniye, v. 13, no. 3, 1962, 457 - 458

TEXT: Referring to his earlier work (Ref. 1 - FMM, 1959, 8, 463), in the course of which polygonization was observed in a 16% Al-Fe alloy (containing 0.02% C and 0.002% N), cooled slowly to the 980 - 590 °C interval and quenched from 590 °C, the present author asserts that the etching pits by which the low-angle boundaries had been revealed were associated mainly with segregation of carbon. He then postulates that nonuniform distribution of trace impurities in a solid solution should be reflected in a marked dependence of the structure-sensitive properties on the mean impurity content of the alloy and proves this contention by experimental data (including those obtained by Jensen and Ziegler in Ref. 4 - Trans. ASM, 1936, 24, 337) reproduced in Fig. 1; in this the maximum permeability

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S/126/62/013/005/018/023
E193/E383

Nonuniform distribution ....

(μ_{max}, 10^3 gauss/Oe) and coercive force (H_c, Oe) are plotted against the carbon content (%, in logarithmic scale) in Fe-Al-C alloys (curve a), Fe-C alloys (curve б) and Fe-Si-C alloys (curve c); data for the Fe-Al-C alloy relate to specimens heat-treated in the manner described at the beginning of the abstract. metallographic examination revealed that specimens 1, 2, 3 and 4 constituted single-phase alloys with evidence of segregation of C near the low-angle block boundaries; specimens 5, 6, etc. consisted of two phases, the second C-rich phase precipitates forming chain-like aggregates along both block and grain boundaries. The microhardness of the second phase was much higher (760 kg/mm^2) than that of the solid-solution matrix (310 kg/mm^2), which indicated that this phase was most likely identical with the K-phase whose existence in the Fe-Al-C system has been postulated by K. Löberg and W. Schmidt (Ref. 3 - Arch. Eisenhüttenw., 1938, 11, 607). There are 3 figures.

Card 2/3

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

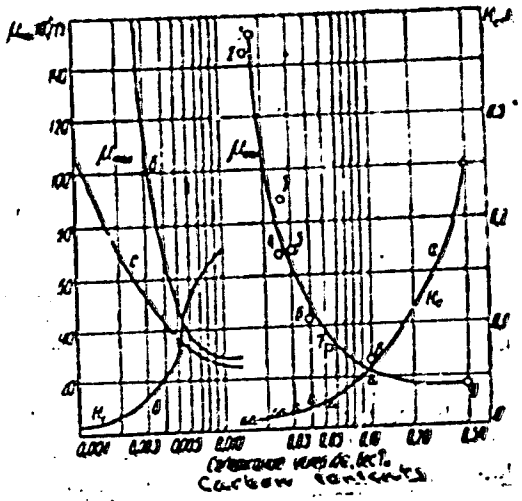
S/126/62/012/003/018/023
E193/E383

Nonuniform distribution ....

ASSOCIATION: Institut pretsizionnykh splavov TsNIIChM (Institute of Precision Alloys of TsNIIChM)

SUBMITTED: July 17, 1961

Fig. 1:



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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MASLENKOV, S. B.; MOLOTILOV, B. V.

Microwave X-ray spectroscopy of Fe-Al-C alloys. Fiz. met. i metalloved. 14 no.4:633-635 O '62. (MIRA 15:10)

1. Institut kachestvennykh staley i Institut pretsizionnykh splavov Instituta novoy metallurgicheskoy tekhnologii imeni I. P. Bardina.

(Iron-aluminum alloys—Metallography)
(X-ray spectroscopy)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

LEBEDEV, D.V.; MOLOTILOV, B.V.; OVSYANNIKOV, B.M.

Methods of mechanical tension testing at temperatures of liquid hydrogen. Sbor. trud. TSNIICHM no.24:414-429 '62. (MIRA 15:6)
(Metals--Testing) (Metals at low temperatures)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B.V.; FEDOTOV, L.N.

Magnetic and dislocation structure of alloys. Sbor. trud. TSNIICHM no.25:5-23 '62. (MIRA 15:6)
(Alloys--Metallography) (Domain structure)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B.V.

Magnetic structure of a deformed and polygonized iron-silicon alloy. Sbor. trud. TSNIICHM no.25:24-32 '62. (MIRA 15:6)
(Iron-silicon alloys--Metallography) (Domain structure)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

LIVSHITS, Boris Grigor'yevich; BUNIN, K.P., prof., retsenzent; VINOGRAD, M.I., kand. tekhn. nauk, st. nauchn. sotr., retsenzent; MOLOTILOV, B.V., red.; ZEKLIN, Ye.N., red. izd-va; KARASEV, A.I., tekhn. red.

[Metallography] Metallografiia. Moskva, Metallurgizdat, 1963. 422 p. (MIRA 16:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut shelkovoy promyshlennosti (for Vinograd).
(Metallography)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

S/032/63/029/004/009/016
A004/A127

AUTHORS: Lebedev, D.V., Molotilov, B.V., Ovsyannikov, B.M.

TITLE: Metal tensile tests at very low temperatures

PERIODICAL: Zavodskaya laboratoriya, no. 4, 1963, 474 - 477

TEXT: The authors analyze methods of metal tensile tests at the boiling point of liquid hydrogen. The specimens were cooled and deformed in a modified and improved Dewar low-temperature vessel. The tests were carried out on a multipurpose P-5 (R-5) testing machine at a deformation rate of 2 mm/min. It is recommended to use cylindrical specimens as this reduces the error magnitudes. The nature of the stressed state arising during the deformation of the specimens can be established according to the angular distribution of stresses in particular, the very substantial effect of bending at low loads. The total error of determining the mechanical characteristics by this method amounts to 5 - 7% of the maximum stress. Based on a statistical analysis it was found that reliable results are obtained with this method both for brittle and ductile metals. There are 5 figures and 1 table.

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S/032/63/029/004/009/016
A004/A127

Metal tensile tests at ....

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I.P. Bardina (Central Scientific-Rese... Institute of Ferrous Metallurgy im. I.P. Bardin)

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

KRIVONOSOVA, Ye.G.; LIVSHITS, B.G.; MOLOTILOV, B.V.

Effect of tempering on the domain structure of deformed single crystals of silicon iron. Izv. vys. ucheb. zav.; chern. met. 6 no.3: 144-147 '63. (MIRA 16:5)

1. Moskovskiy institut stali i splavov i Institut pretsizionnykh splavov im. Bardina.
(Iron alloys—Heat treatment) (Domain structure)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

L 12475-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD
S/185/63/008/003/007/009

59
57

AUTHOR: Aptekar', I. L. and Molotilov, B. V.

TITLE: Brittleness of ordered alloys with body-centered cubic lattice

PERIODICAL: Ukrains'kyy Fizychnyy Zhurnal, v. 8, no. 3, 1963, 373-376.

TEXT: The work investigates transition from plastic to brittle state of ordered alloys with body-centered cubic lattice. This work considers: 1. dependence of transition point on ordering; 2. the effect of deformation on lowering of transition point for ordered and disordered alloys; 3. surface effect on the transition point. Specifically the article investigates the dependence of embrittlement temperature of iron-cobalt alloy, determined by flexure tests, on ordering. It was found that the embrittlement temperature is the same for ordered and disordered alloys (within the precision of measurement). The difference between them is manifested only in the case of repeated bending. The presence of oxide films and of hydrogen in the surface layer leads to a perceptible rise in the embrittlement temperature of the specimens in both ordered and disordered states. The experimental results are treated with reference to the theory of dislocations. The article contains one

Card 1/2

Central Scientific Research Inst. of Ferrous Metallurgy and Inst. of Precision Alloys, Moscow.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B.V.; KOCHNOV, V.Ye.; BELIKOV, A.M.; GERSHMAN, R.B.

Methods of revealing the substructure in electrical steel. Stal' 23 no.3:251-252 Mr '63. (MIRA 16:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii i Chelyabinskiy nauchno-issledovatel'skiy institut metallurgii.

(Iron-silicon alloys—Pickling)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

LIVSHITS, Boris Grigor'yevich; MOLOTILOV, B.V., red.; BERLIN, Ye.N., red.izd-va; KARASEV, A.I., tekhn. red.

[Metallography] Metallografiia. Moskva, Metallurgizdat, 1963. 422p. (MIRA 16:12)

(Metallography)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B.V.

Interaction of ferromagnetic domain boundaries with defects of crystal lattices in alloys (disturbances of lattice homogeneity linked with phase transformations). Izv. AN SSSR. Ser. fiz. 27 no.12:1464-1468 D '63. (MIRA 17:1)

1. Institut pretsizionnykh splavov Instituta novoy metallurgicheskoy tekhnologii imeni I.P. Bardina.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B.V.

Metallographic methods of revealing dislocations in iron and nickel-base alloys. Sbor. trud. TSNIICHM no.32:43-50 '63.

Methods of investigating the magnetic microstructure of alloys. Ibid.:91-99 (MIRA 16:12)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B.V.; SHIRLOV, I.F.

Using the method of a magnetic suspension for the investigation of processes at grain boundaries in ferromagnetic materials. Sbor. trud. TSNIICHM no.38:42-46 '64.

(MIRA 18:3)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

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L 2[illegible] EWT(m)/EWP(w)/EPF(n)/EPF(n)-2/EPR/T/EWP(t)/EWP(t)/EWA(m) [illegible]
Pz-4/Pu-4 JD

ACCESSION NR: AT5003403 S/2776/64/000/038/0115/0118 47

AUTHOR: Lebedev, D. V.; Molotilov, B. V.; Ovsyannikov, E. M. 45

TITLE: Tensile testing equipment for very low temperatures 18 B+1

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 38, 1964. Novyye metody ispytaniy metallov; metallograficheskiye issledovaniya i mekhanicheskiye ispytaniya metallov (New methods in the analyses of metals; metallographic investigations and mechanical analyses of metals), 115-118

TOPIC TAGS: tensile testing, cryostat, liquid helium, liquid nitrogen, low temperature test

[illegible] number of methods suitable for low temperature testing, and particularly unidirectional static tensile tests. The authors' Institute has been working on the simplification of available tensile testing machines. An improved design was also sought with a view to reducing the amount of He used as a coolant. Furthermore, the new machine was to have a capacity for testing single crystals, polycrystalline microsamples and standard cylindrical specimens 4 to 5 mm in diameter or

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L 27760-65

ACCESSION NR: AP5003403

flat specimens 2 to 5 mm thick. A wall-type microtester was designed and among several models a cryostat suggested by A. E. Fredkov was found to be most convenient and compact. Loss of heat through its walls was diminished by tightening the connections and the use of rubber membranes prevented the leakage of the coolant. Isolation from the ambient air was improved by additional cooling with liquid nitrogen. The loads applied were recorded by means of an oscillography system. A centering device provided reliable centering of the work piece. The working chamber was isolated with mirror-finished copper sheets, 0.1 mm thick, clad with Cr, Ni or Ag. However, the search for better equipment continues. Orig. art. has: 3 figures.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii, Moscow (Central ferrous metallurgy scientific research institute)

SUBMITTED: 00 ENCL: 01 SUB CODE: SS, MM

NO REF SOV: 005 OTHER: 000

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ACCESSION NR: AT5003403 ENCLOSURE: 01

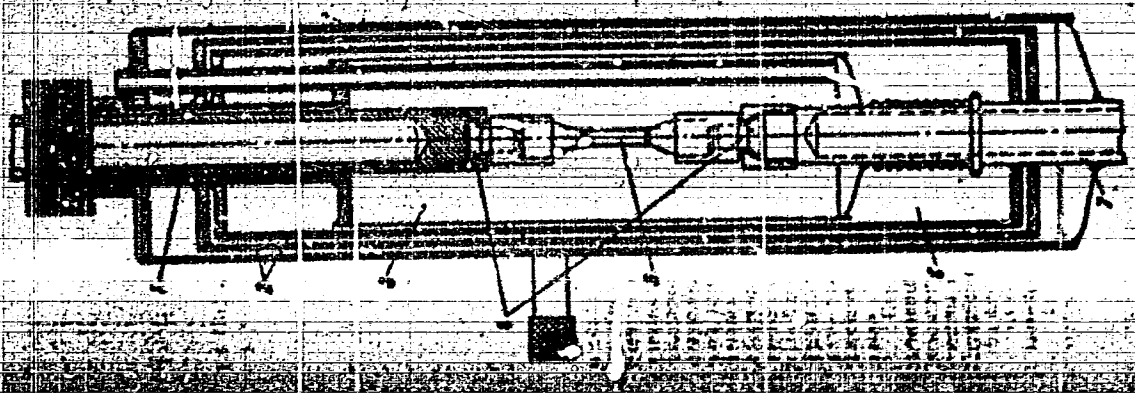

Figure 1. Schematic view of the model-4 cryostat: (1) active pull; (2) radiation screens; (3) working chamber with liquid He; (4) centering device; (5) specimen; (6) vacuum chamber; (7) passive pull.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, B.V.; GOLIKOV, I.N.

Magnetic structure of transformer steel containing non-metallic inclusions. Stal' 24 no.1:69-72 Ja '64. (MIRA 17:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

LEBEDEV, D.V.; MOLOTILOV, B.V.; OVSYANNIKOV, B.M.

Mechanism of the low-temperature deformation of iron-aluminum, iron-cobalt-vanadium alloys, and commercial-grade iron. Sbor. trud. TSNIICHM no.39:175-180 '65. (MIRA 18:7)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

L 42194-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWI(c) IJP(c) JD

ACC NR: AP6011547 SOURCE CODE: UR/0105/66/000/004/0084/0087

AUTHOR: Brashevan, G. A. (Engineer); Molotilov, B. V.

ORG: TsNIIChermet im. Bardin (TsNIIChermet)

TITLE: Effect of machining on the magnetic properties of magnets made from electrical steels

SOURCE: Elektrichestvo, no. 4, 1966, 84-87

TOPIC TAGS: magnetic steel, magnetic property, steel, magnetic circuit, metal machining

ABSTRACT: Experimentally determined deterioration of magnetic properties of E330 (3% Si) and S6 transformer (6% Si) steels due to machining is reported; the conditions required for restoration of the magnetic properties in some products are considered; establishing a method for quantitative evaluation of the above deterioration is attempted. Two toroidal specimen types were tested: (1) A torus

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ACC NR: AP6011547

stacked from stamped rings having a 20-mm ID and a 30-mm OD; (.) A torus wound from a 10-mm wide tape (made by circle-cutting shears) also having a 20-mm ID. The effects of annealing, at temperatures up to 1100C, on the depth of edge-workhardened zone, the coercive force, and the maximum permeability were studied (curves supplied). An experimentally obtained relation of coercive force and maximum permeability vs. volume of the machining-affected zone can be used for evaluating the variation of magnetic properties due to stamping, cutting, and annealing. Orig. art. has: 5 figures.

SUB CODE:13,11/20 SUBM DATE: 06Sep65 / ORIG REF: 007

Card 2/2 MLP

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, G.V.

Distortions of the crystal lattice due to mechanical twinning. Kristallografiia 7 no.2:323-325 Mr-Ap '62. (MIRA 15:4)

1. Institut pretsizionnykh splavov TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii imeni I.P.Bardina.
(Dislocations in crystals)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

Molybdenum, N. N.

1-RG

6958* (Russian.) The Order-Disorder Mechanisms in the Alloy Ni-Mo With Various Additions of Molybdenum. O mekhanizme uporiadochenila splava Ni-Mo s razlicnymi prisadkami molibdena. V. G. Lifshits, B. V. Molotilov, N. N. Mialler, and N. A. Savostianova. Fizika Metallov i Metallovedenie, v. 5, no. 1, 1958, p. 177-182.

The order-disorder process in the binary alloy Ni-Mo, and a ternary Ni-Mo-Mo alloy takes place as a phase transformation.

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ARMAND, G.B.; VYAZ'MIN, V.A.; GRINSHTEYN, L.M.; GOL'DBERG, G.I.; GOLUBEV, B.S.; KASHLAKOV, M.V.; KRASHOPEVTSEV, M.P.; KUZNETSOV, S.I.; KURAYEV, A.V.; KAYUKOV, G.I.; MASHATIN, V.I.; MOLOTILOV, V.I.; NEKRUSH, A.R.; PRAL', G.I.; RAGUSKAYA, L.F.; RUBINSHTEYN, S.M.; SEMENKOV, P.L.; TARASOV, L.A.; FEDOROVA, A.A.; TSEPKIN, M.F.; SHAYEVICH, A.G.; ZARUBIN, A.G., otv.red.; VASIL'YEVA, I.A., red. izd-va; SOKOLOVA, T.F., tekhn.red.

[ZIL-157 motortruck; operation and service] Avtomobil' ZIL-157; instruktsiia po ekspluatatsii. Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1958. 235 p. (MIRA 11:12)

1. Moskovskiy avtomobil'nyy zavod.
(Motortrucks)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOV, V. N.

Mathematical dependence of the urea content in urine on its specific gravity. Urologiia no.6:66-67 '61. (MIRA 15:4)

(UREA) (URINE—ANALYSIS AND PATHOLOGY)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOVA, G.P.

Data on fluorescent examination of blood cells and bone marrow in healthy persons. Lab. delo 10 no.5:259-263 '64. (MIRA 17:5)

1. Kafedra laboratornoy klinicheskoy diagnostiki (zaveduyushchiy - prof.Ye.A.Kost) TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTILOVA, G.B.

Difference between the cytoplasm granules of mature neutrophilic leucocytes in healthy persons and leukemia patients. Trudy TSIU 77:64-68 '65. (MIRA 18:9)

1. Kafedra laboratornoy klinicheskoy diagnostiki (zav.- prof. Ye.A. Kost) TSentral'nogo instituta usovershenstvovaniya vrachey.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8

MOLOTIVA, L.V.

Recording of deep reflections in seismic prospecting. Trudy Inst.fiz.zem. no.6:237-252 '59. (MIRA 13:5)
(Seismometry)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135110001-8"