An apparatus for producing films... S/120/62/000/003/032/048
E032/E114

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR
(Physicotechnical Institute AS USSR)

SUBMITTED: November 14, 1961

Card 2/2

15750

Z/011/62/019/010/004/009
E112/E435

AUTHORS: Grigor'yev, A.D., Petrov, L.A.

TITLE: On increasing the production rate and improving the quality of the insulating varnish "Eskapon"

PERIODICAL: Chemie a chemická technologie. Přehled technické a hospodářské literatury, v.19, no.10, 1962, 465, abstract Ch 62 6283. (Lakokras. Materialy, no.3, 1962, 39-41)

TEXT: "Eskapon" is the trade name of an insulating varnish based on synthetic rubber. Thermal stability of rubber insulating varnishes was improved by modifying them through epoxidation, chlorination or oxidation. For instance, excellent ageing properties up to 150°C were achieved with a fibre impregnated with an oxidized varnish, without affecting adversely its electrical insulation properties. "Eskapon" is used mainly in the manufacture of mica insulation and for impregnating insulation fabrics. 1 table, 11 literature references.

[Abstracter's note: Complete translation.]

Card 1/1

S/081/63/000/002/083/080
B117/B186

AUTHORS: Grigor'yev, A. D., Petrov, L. A.

TITLE: On the problem of intensifying production and improving quality of Escapon varnish for electric insulation

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1963, 574, abstract 2T325 (Lakokrasochn. materialy i ikh primeneniye, no. 3, 1962, 39-41)

TEXT: It was found experimentally that Na-butadiene rubber dissolves in petroleum three times as fast if premasticated for 1/2 hr in a generator with a frequency of 25 Mc/s and a power of 1 kv, wherein the rubber is heated to 90-100°C. It can easily be cut with the knife so may be passed over directly into the screw extruder of the reaction vessel. Thus the heat balance of the reaction vessel is improved and a continuous production of Escapon varnish is rendered possible. By determining the total unsaturation, the molecular weights and the IR spectra of the rubber as well as of the compounded rubber and of the volatile fraction (waste in the production of the compounded rubber) the structure of the rubber was

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On the problem of intensifying ...

S/081/63/000/002/085/088
B117/B186

found to change during its thermal decomposition. The volatile fraction is a complex product of thermal degradation, isomerization and cyclization of the rubber. There are practically no double bonds in the compounded rubber and its structure resembles that of cyclized rubbers, which increases their resistance to heat. The heat resistance of the Lacapon insulation is increased by modifying the rubber component of the varnish. By oxidation of this component or of the varnish, for instance, it was possible to prolong the durability of the glass-fabric reinforced Lacapon by 2-3 times at 150°C; satisfactory insulating properties and elasticity were conserved. [Abstracter's note: Complete translation.]

Card 2/2

SOV/163-58-2-46/46

AUTHORS: Zubov, V. Ya., Grachev, S. V., Grigor'yev, A. F.

TITLE: The Influence of the Normal and the Isothermal Treatment on the Relaxation Stability of Spring Steel (Vliyaniye obychnoy i izotermicheskoy obrabotki na relaksatsionnuyu stoykost' pruzhinnoy stali)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 2, pp. 249-255 (USSR)

ABSTRACT: The relaxation stability of metals and alloys is to a great extent determined by their structure. In the present paper comparative investigations of the relaxation stability of spring steel of the types EI142 and U9A under normal and isothermal treatment are described. The effect of the residual austenite on the relaxation process was discussed. The relaxation stability of spring steel treated the normal and the isothermal way depends on the conditions of relaxation. At low relaxation temperatures of the steel with martensite structure the relaxation stability is greater than in the case of a steel having a structure as in the complete decomposition of austenite. The change of the relaxation stability of the isothermally treated

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The Influence of the Normal and the Isothermal Treatment on the Relaxation Stability of Spring Steel

steel does not take a monotonous course at low temperatures. When the temperature of treatment is increased the relaxation stability first increases but then decreases again. Steel isothermally treated at high temperatures has the greatest relaxation stability at an increase in temperature. The residual austenite decreases the relaxation stability of the steel at low as well as at high relaxation temperatures, since at low temperatures a low resistance to plastic deformation exists, and at high temperatures a decomposition of the austenite takes place during the relaxation process. From this may be concluded that in the isothermal decomposition the presence of the residual austenite leads to a considerable decrease of the relaxation stability of the steel. There are 4 figures, 4 tables, and 9 references, 8 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute)

GRIGOR'YEV, A. F.

Grigor'yev, A. F. "On the internal reserves of the enterprises of local industry in Saratov", Saratov, Issue 7, 1948, pp. 67-72.

SO: U-3261, 10 April 53, (Letopis 'Zhurnal 'nykh Statey , No. 11, 1949).

GRIGORIYEV, A. F.

GRIGORIYEV, A. F. -- "Efficient Utilization of Power in Rotary Drilling." Sub 3 Jun 52 Moscow Order of Labor Red Banner Petroleum Inst imeni Academician I. M. Gubkin (Dissertation for the Degree of Candidate in Technical Science)

SO: Vechernaya Moskva, January-December 1952

GRIGOR YEV, A.F

AID P - 582

Subject : USSR/Mining

Card 1/1 Pub. 78 - 19/22

Authors : Polanskiy, A. P., Rakina, V. N., and Grigor'yev, A. F.

Title : Experience with a multi-purpose and combined exploitation of wells in the Saratovgas Trust

Periodical : Neft. Khoz., v. 32, #8, 85-89, Ag 1954

Abstract : A description of coordinated management in training of the gas well operating and repair personnel; outline of the organization of the professional schools, special workers study groups and brigades for various coordinated emergency and safety works; description of two apparatuses specially designed for simple control of gas flow with definite rate and for automatic "blow-out" of liquid from the gas separator. Two drawings.

Institution : None

Submitted : No date

GRIGOR'YEV, A. G., Engr. Cand. Tech. Sci.

Dissertation: "Optimum Conditions for Using Forge Dies in Automobile Production." Moscow Automotive Mechnaics Inst, 8 May 47.

SO: Vechernyaya Moskva, May, 1947 (Project #17836)

BALAKSHIN, O.B., kand. tekhn. nauk; BYKHOVSKIY, M.L., prof., doktor tekhn. nauk; VOLODIN, Ye.I., kand. tekhn. nauk; GRIGOR'YEV, I.A., kand. tekhn.nauk; DRAUDIN-KRYLENKO, A.T., inzh.; IVANOV, [redacted] kand. tekhn.nauk; KOZLOV, M.P., kand. tekhn. nauk; KOROTKOV, V.P., prof.; KOCHENOV, M.I., kand. tekhn.nauk; KUTAY, A.K., kand. tekhn. nauk; MARKOV N.N.,kand. tekhn. nauk; PALEY, M.A., inzh.; RAYZMAN, N.S., kand. tekhn.nauk; ROSTOVYKH, A.Ya., kand. tekn. nauk; RUMYANTSEV, A.V., kand. tekhn.nauk; SARKIN, I.G., prof.; SMIRNOV, A.S., inzh.; TAYTS, B.A., prof., doktor tekhn. nauk; YAKUSHEV, A.I., prof., doktor tekhn. nauk; NESTEROV, V.D., inzh., nauchnyy red.; CHUDOV, V.A., inzh., nauchnyy red.; GAVRILOV, A.N., doktor tekhn.nauk, prof., red.; BLAGOSKLONOVA, N.Yu., inzh., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Manufacture of instruments and means of automatic control: a manual in five volumes] Priborostroenie i sredstva avtomatiki; spravochnik v piati tomakh. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry. Vol.1.[Interchangeability and engineering measurements] Vzaimozameniaemost' i tekhnicheskie izmereniia. 1963. 568 p. (MIRA 16:8)
(Electronic measurements) (Automatic control)

GRIGOR'YEV, A. I.

SAVZDARG, V.E., red.; TULIN, N.S., red.; DOLINSKIY, N.M., red.; GRIGOR'YEV, A.I., red.; GOR'KOVA, Z.D., tekhn.red.

[Heroes of virgin lands; practices of subjugators of virgin lands in Kazakhstan, Siberia, Urals, and Volga Valley] Geroi tseliny; iz opyta pokoritelei tseliny Kazakhstana, Sibiri, Urala i Povolzh'ia. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 566 p. (MIRA 11:4)
(Reclamation of land)

GRIGOR'YEV, A. I.

Grigor'ev, A. I., O sutochnom khode skorosti vetra nad vodoemami. [Diurnal variation of wind velocity over reservoirs.] *Meteorologiia i Gidrologiia*, Leningrad, No. 3:35-36, March 1956. table. DWB, DLC—Measurements of hourly wind velocity were made simultaneously at 3.0 and 7.8 meters above the surface of an artificial island in Lake Ladoga and data on the mean hourly wind velocity for each period [illegible] The diurnal variation of wind velocity above the surface [illegible] from its banks is opposite that of the diurnal variation [illegible] wind velocity occurs in the morning, the minimum in the afternoon. Subject heading: 1. Diurnal wind velocity variations. 2. Reservoirs. 3. Lake Ladoga, U.S.S.R.—I. L. D.

GRIGOR'YEV, A. I.

Some characteristics in forecasting winds over confined water basins. Trudy TSIP no.42:25-33 '56. (MLRA 9:11)

1. Gidrometbyuro pri Severo-Zapadnom upravlenii rechnogo parokhodstva Severo-Zapadnogo upravleniya gidrometsluzhby.
(Winds)

GRIGORYEV, A.I.

USSR/Inorganic Chemistry. Complex Compounds. C

Abs Jour: Ref. Zhur-Khimiya, No 1, 1958, 674.

Author : Grigoryev, A.I., Novoselova, A.V., Semenenko, K.N.
Inst :
Title : On the Interaction of Berillium Oxyacetate with Ammonia, Methyl Amine, Ethyl Amine, and Sulfur Dioxide.

Orig Pub: Zh. Neorgan. Khimii, 1957, 2, No 6, 1374-1376.

Abstract: By dissolving $Be_4O(CH_3COO)_6$ in liquid NH_3, CH_3NH_2, $C_2H_5NH_2$ and in SO_2 there were obtained $Be_4O(CH_3COO)_6.4\ NH_3$ (I), $Be_4O(CH_3COO)_6.4\ CH_3NH_2$ (II), $Be_4O(CH_3COO)_6.3C_2H_5NH_2$ (III), and $3Be_4O(CH_3COO)_6.4SO_2$ (IV), respectively. Decomposition of I and III starts at 50-60° and 60-70° respectively and ends at 180 and 170-180°; II starts to decompose at room temperature; a complete decomposition takes place at 160°; IV is unstable at room temperature. The authors refer the compounds obtained to inclusion compounds.

Card : 1/1 -15-

GRIGOR'YEV, A.I.; NOVOSELOVA, A.V.; SEMENENKO, K.N.

Interaction between beryllium oxyacetates and alcohols. Zhur. neorg.khim. 2 no.9:2067-2072 S '57. (MIRA 10:12)
(Beryllium acetates) (Alcohol)

AUTHORS: Grigor'yev, A.I., Novoselova, A.V., Semenenko K.N. SOV/78-3-7-22/44

TITLE: On the Compounds of Berylliumoxyacetate With Ethylamine and Butylamine (O soyedineniyakh oksiatsetata berilliya s etilaminom i butilaminom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 7, pp 1599-1604 (USSR)

ABSTRACT: Compounds of berylliumoxyacetate with ethylamine and butylamine were synthetized. Analyses resulted in the following compositions: $Be_4O(CH_3COO)_6 \cdot 8\ C_2H_5 \cdot NH_2$, $Be_4O(CH_3COO)_6 \cdot 4\ C_2H_5 \cdot NH_2$, $Be_4O(CH_3COO)_6 \cdot 3\ C_2H_5 \cdot NH_2$, $Be_4O(CH_3COO)_6 \cdot 8\ C_4H_9NH_2$, $Be_4O(CH_3COO_6) \cdot 4C_4H_9 \cdot NH_2$, $Be_4O(CH_3COO)_6\ 3\ C_4H_9NH_2$ and $Be_4(CH_3COO)_6 \cdot C_4H_9NH_2$.

The complex compounds with butylamine are easily decomposed. The crystal lattices of the compounds $Be_4O(CH_3COO)_6 \cdot 4\ C_2H_5NH_2$ and $Be_4O(CH_3COO)_6 \cdot 4\ C_4H_9NH_2$ are very similar. The thermograms of the compounds of berylliumoxyacetate with ethylamine and butylamine

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On the Compounds of Beryllium oxyacetate With Ethylamine and Butylamine

SOV/78-3-7-22/44

were investigated. It turned out that the complexes with butylamine are less stable than those with ethylamine. The thermal decomposition of the compounds of beryllium oxyacetate with ethylamine occurs at a comparatively low temperature and is accompanied by an endothermal effect, which is indicative of strong interaction between the components of the complex. The thermograms show that complete decomposition of the compounds occurs at 110-120° C, and that the complexes with butylamine are decomposed at temperatures that are 15° C lower than in the case of ethylamine. Separation of 2 molecules butylamine from butylamine complexes occurs more easily than that of the third molecule of butylamine. There are 4 figures, 1 table and 4 references, 3 of which are Soviet.

SUBMITTED: June 26, 1957

1. Complex compounds--Synthesis 2. Complex compounds--Analysis 3. Beryllium--Properties 4. Acetates--Properties 5. Ethylamines --Properties 5. Butylamines--Properties 6. Crystals--Lattices

Card 2/2

AUTHORS: Grigor'yev, A. I., Semenenko, K. N. SOV/78-3-12-34/36

TITLE: Concerning the Compound Beryllium Oxyacetate With Methyl Amine (O soyedinenii oksiatsetata berilliya s metilaminom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 12, pp 2806-2807 (USSR)

ABSTRACT: The compound $Be_4O(CH_3COO)_6 \cdot 4CH_3NH_2$ was prepared in the form of large rhombic prisms by slow vaporization of a saturated solution in liquid methyl amine at room temperature. X-ray studies showed that this compound crystallizes with a triclinic lattice with the following parameters: a=8.34 Å, b=10.20 Å, c=9.44 Å, $\alpha=58^\circ$, $\beta=55^\circ$, $\gamma=60^\circ$. The polythermal decomposition curve of $Be_4O(CH_3COO)_6 \cdot 4CH_3NH_2$ was constructed using the thermogravimetric determination method. The compounds formed by beryllium with ethyl and butyl amines have similar properties to those which form from methyl amine.
There are 1 figure and 2 Soviet references.

Card 1/2

GRIGOR'YEV, A. I.

AUTHORS: Grigor'yev, A. I., Yaroslavova, A. V., Semenenko, K. N. 20-2-25/60

TITLE: Determination of the Molecular Weight of Dissolved Substances According to the Method of Diffusion Through a Porous Glass Plate (Opredeleniye molekulyarnykh vesov rastvorennykh veshchestv metodom diffuzii cherez poristuyu steklyannuyu plastinku)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 2, pp. 190-192 (USSR)

ABSTRACT: The idea of Northrop Anson (reference 1) was applied to determine molecular weights (of the order of magnitude of 400 to 500) of substances dissolved in chloroform. The molecular weights are computed from the experimentally found diffusion coefficients of the substance under investigation and of a substance with a known molecular weight with the formula:

$$\frac{D'}{D''} = \frac{\sqrt{M''}}{\sqrt{M'}}$$

Card 1/2 The oxyacetate and the oxypropionate of beryllium were in-

Determination of the Molecular Weight of Dissolved Substances According to the Method of Diffusion Through a Porous Glass Platelet 32-2-25/60

vestigated and a difference of only 0,5% to the computed molecular weight was found. When the molecular weight of anthracene was determined, however, a difference of 19% was found, which can be due to the differences between the structures of the Be-oxyacetate and that of anthracene (corresponding to the observations made by Drintsmeyer, reference 3). The application of a standard as an accompanying substance is therefore proposed for the purpose of improving the method. The radioactive C^{14} isotope was, among others, used in order to remove difficulties of analytical kind. For the determination of the specific activities, the solutions within the cell and without were vaporized after diffusion, the residue was desiccated, combusted and the $C^{x}O_2$ was transformed into $BaC^{x}O_3$. There are 1 figure, 4 tables, and 4 references, 1 of which is Slavic.

ASSOCIATION: Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova)

AVAILABLE: Library of Congress
Card 2/2

1. Molecular weight-Determination 2. Chloroform-Applications

SOV/20-122-3-20/57

AUTHORS: Grigor'yev, A. I., Corresponding Member, Academy of Sciences, USSR, Novoselova, A. V., Semchenko, K. N.

TITLE: Compounds of Beryllium Hydroxy Acetate With Sulfur Dioxide (Soyedineniya oksiatsetata berilliya s sernistym angidridom)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 3, pp 397-399 (USSR)

ABSTRACT: Affiliation products containing mainly amino nitrogen are described for beryllium hydroxy acetate (Refs 1-3). These compounds are stable enough and are probably formed at the expense of the free electron pair of nitrogen. However, for the substance mentioned first in the title compounds of a weaker binding may be expected, namely of the type of the so-called "inclusion compounds" (soyedineniya vklyucheniya Pl.) (Refs 4,5). The compound mentioned in the title probably is such an "inclusion compound" (Ref 2). This problem is discussed in detail in the present paper. In the concentration by the evaporation of a solution of beryllium hydroxy acetate in liquid sulfur dioxide the latter compound is precipitated in form of well developed octahedrons. The thus forming compound

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is extremely instable at room temperature and decomposes into its two initial products. This makes difficult the determination of its composition and the preparative isolation by means of the usual methods of chemical analysis. In order to investigate the interaction of both substances mentioned in the title the authors studied the method of the construction of diagrams at a constant temperature: composition - vapor pressure in the system formed by them. For this purpose they used the Huettig tensiometer (tenzievdiometr) (Ref 6). The working process is described. The equilibrium could be observed after 10-20 hours. Figure 1 shows the isothermal lines of the composition versus pressure function for -9,5, -15, -20 and -30°. From the general view of the isothermal lines it can be seen that in the case of a concentration by evaporation of one of the mentioned saturated solutions a compound $Be_4O(CH_3COO)_6 \cdot 2SO_2$ is precipitated. Thus, it was observed that the compound $3Be_4O(CH_3COO)_6 \cdot 4SO_2$ (described by the authors in reference 2) represents a product of a partial decomposition of the compound of beryllium hydroxy acetate with molecules of sulfur dioxide. Besides a compound 2 : 1 another one 1 : 1 $Be_4O.(CH_3COO)_6 \cdot SO_2$ which forms on the

Compounds of Beryllium Hydroxy Acetate With Sulfur Dioxide

decomposition of the first was observed in the system. The stability of the compounds decreases with the increase in temperature. It is remarkable that in this case the values of the heats of formation (on the average 9,22 kcal per 1 g mol SO_2) are lower than in the normal case of coordination compounds. Furthermore, it is of interest that at -10° (boiling point of SO_2) the discussed compounds ha e the characteristic features of solid solutions and can exist only at increased pressure. According to radiographic analyses $Be_4O(CH_3COO)_6 \cdot 2SO_2$ crystallizes in a cubic diamond-like lattice with a period of the elementary cell of a = 17,1 Å. The density at -12° = 1,43, roentgen density = 1,42. In conclusion a rough outline of the structure of this substance is given. There are 2 figures and 7 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

GRIGOR'YEV, A. I. Cand Chem Sci -- (diss) "Studies in the field of chemistry of oxyacetates of beryllium." Mos, 1959. 12 pp (Mos State Univ im M. V. Lomonosov. Chem Faculty. Chair of Inorganic Chemistry), 150 copies (KL, 41-59, 103)

05892

5(2),5(3) SOV/78-4-11-45/50

AUTHORS: Grigor'yev, A. I., Novoselova, A. V.

TITLE: On the Interaction of Beryllium Oxyformiate and -oxypropionate With Ammonia

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, pp 2640-2641 (USSR)

ABSTRACT: Previous papers (Refs 1-3) dealt with the reaction of beryllium oxyacetate, a compound of the type Be_4OR_6, in which R denotes the radical of a monobasic organic acid, with ammonia and amines. With respect to the kind of production and chemical behaviour, the oxypropionate now investigated differs little from the oxyacetate compound. The oxyformiate, however, cannot be produced - like these compounds - directly from the organic acid and the beryllium hydroxide or -carbonate, but is only obtained after a vacuum distillation of the normal beryllium formiate. The reaction of the Be-oxypropionate and -oxyformiate with ammonia was investigated under equal conditions as they are applied in preparing the compound $Be_4O(CH_3COO)_6 \cdot 4NH_3$. The oxypropionate yielded the

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On the Interaction of Beryllium Oxyformiate and -oxypropionate With Ammonia

compound $Be_4O(C_2H_5COO)_6 \cdot 5NH_3$. The $Be_4O(HCOO)_6$, however, reacts with NH_3 to form a finely crystalline precipitate the analysis of which is given, but for the composition of which no formula is set up. The filtrate was evaporated in the vacuum for several days, and formed a viscous noncrystallizing mass. There are 4 Soviet references.

SUBMITTED: July 9, 1959

Card 2/2

5(2) SOV/20-125-3-25/63

AUTHORS: Grigor'yev, A. I., Novoselova, A. V., Corresponding Member AS USSR, Semenenko, K. N.

TITLE: On the Compound Formed by Beryllium Oxy-acetate and Nitrogen Dioxide (O soyedinenii oksiatsetata berilliya s dvuokis'yu azota)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 557-559 (USSR)

ABSTRACT: It was found that $Be_4O(CH_3COO)_6$ forms adducts with NO_2, similar to those formed with SO_2 ($Be_4O(CH_3COO)_6.2SO_2$ and $Be_4O(CH_3COO)_6.SO_2$). The mentioned oxy-acetate is well soluble in liquid nitrogen dioxide at room temperature. If this solution is vaporized achromatic needlelike anisotropic crystals are separated. They decompose quickly in air under formation of brown NO_2-vapors. After this decomposition beryllium oxy-acetate is left back in its cubical basic modification. The composition of the crystals may be approximately described by the following formulas: $Be_4O(CH_3COO)_6.3NO_2$ or

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On the Compound Formed by Beryllium Oxy-acetate and Nitrogen Dioxide

$Be_4O(CH_3COO)_6 \cdot 1,5N_2O_4$. By means of the measurement of the magnetic susceptibility was found that N_2O_4 probably takes part in the mentioned compounds. In order to define their composition precisely as well as in order to determine the possibility of formation of other compounds in the system beryllium oxy-acetate - nitrogen dioxide the diagrams: composition - vapor pressure at constant temperature were plotted. The tensieudiometer of Hüttig (Khyuttig) served for this purpose. Its main parameters and the method were the same, as in reference 1 with the exception of a small modification which takes the aggressiveness of the gas into account because it reacts with mercury. After 2-3 hours the equilibrium in the system was reestablished. Figure 1 shows isothermal lines at 10.0 and 19.0°C. Their general shape shows that the compound $Be_4O(CH_3COO)_6 \cdot 1,5N_2O_4$ is separated by the evaporation of the saturated $Be_4O(CH_3COO)_6$ solution in the liquid NO_2. No other compounds were found to exist in the system. The last mentioned compound dis-

On the Compound Formed by Beryllium Oxy-acetate and Nitrogen Dioxide

sociates as a true chemical compound in contrast to the two compounds formed with SO_2 (mentioned above). The decomposition of the two last mentioned compounds proceeds by the formation of phases of variable composition. This contrast is assumed to explain the quicker establishment of the dissociation equilibrium of the compound with NO_2. The dependence of the dissociation pressure was explained by the isothermal lines (Table 1, Fig 2). Furthermore the compound obtained was investigated radiographically, its density and crystalline structure determined. There are 2 figures, 1 table, and 4 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy gosudarstvenny universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: January 2, 1959

S/078/60/005/010/028/030/XX
B017/B067

AUTHORS: Grigor'yev, A. I. and Novoselova, A. V.

TITLE: Complex Compounds of Beryllium Oxyacetate With Ammonia and Aliphatic Amines

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 10, pp. 2280-2283

TEXT: The authors studied the dissociation of the compounds forming in the system $Be_4O(CH_3COO)_6$ - NH_3 by measuring the vapor pressure at -33, +25, and +50°C; the isotherms of vapor pressure at the above temperatures are reproduced in Figs. 1 and 2. It was found that a compound with the composition $Be_4O(CH_3COO)_6 \cdot 12NH_3$ is formed on the dissolution of beryllium oxyacetate in ammonia at -33°C. Vapor pressure measurements at 25 and 50°C showed that this compound decomposes under formation of phases of different compositions. The compounds with the composition $Be_4O(CH_3COO)_6 \cdot 3R\text{-}NH_2$ (R = CH_3, C_2H_5, C_4H_9) are unstable, and decompose on

Complex Compounds of Beryllium Oxyacetate With Ammonia and Aliphatic Amines

S/078/60/005/010/028/030/XX
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heating to 100°C. For determining the structure of complex compounds of beryllium oxyacetate with ammonia, the infrared absorption spectra were taken by means of an ИКС-11 (IKS-11) spectrograph with KBr, NaCl, and LiF prisms. The formation of complex compounds of beryllium oxyacetate with ammonia and with amines is caused by a regrouping of the inner addenda of the complex $Be_4O(CH_3COO)_6$. Part of the acetate groups of the inner sphere of the complex are displaced by ammonia and amine, and the acetate groups ionized in this connection cause the electrical conductivity of the solutions of complex compounds of beryllium oxyacetate with ammonia and with amines. Beryllium oxyacetate itself is a non-electrolyte. The molar electrical conductivity of solutions of beryllium oxyacetate in liquid ammonia was measured at +10 and -33°C. The temperature dependence of the electrical conductivity of 0.15 molar solutions of beryllium oxyacetate in liquid ammonia showed that the electrical conductivity increases with decreasing temperature, and attains a maximum at -30°C; at lower temperatures, it decreases again. Further studies are necessary to determine the structure of complex compounds of beryllium oxyacetate with ammonia and amines. There are 5 figures, 1 table, and

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Complex Compounds of Beryllium Oxyacetate With Ammonia and Aliphatic Amines

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13 references: 7 Soviet, 4 US, 1 British, and 1 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 9, 1959

Card 3/3

BOKUCHAVA, M.A.; SKOBELEVA, M.I.; KNYAZEVA, A.M.; GRIGOR'YEV, A.I.; POLUPANOVA, R.V.

Results of testing the new technological of manufacturing black tea in the Dagomys Tea Factory in 1958-1959. Biokhim. chain. proizv. no.8:176-185 '60. (MIRA 14:1)

1. Trest "Aserchay", Baku.
(Azerbaijan--Tea)

POGOMILOVA, Ye.G.; GRIGOR'YEV, A.I.; NOVOSELOVA, A.V.

Interaction of the complex compounds of Beryllium oxyacetate of the type $Be_4O(CH_3COO)_6 \cdot 3R - NH_2$ with alcohols. Zhur.neorg.-khim. 7 no.6:1285-1290 Je '62. (MIRA 15:6)
(Beryllium acetate) (Alcohols)

TYULENEV, A.K.; GRIGOR'YEV, A.I.; MOVOSELOVA, V.A.

Interaction of normal beryllium acetate with ammonia and ethylamine. Zhur.neorg.khim. 8 no.1:251-253 Ja '63. (MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, kafedra neorganicheskoy khimii.
(Beryllium acetate) (Ammonia) (Ethylamine)

GRIGOR'YEV, A.I.

Infrared absorption spectra of acetates of the elements of the 1st and 2nd groups of the periodic system. Zhur.neorg.khim. 8 no.4:802-810 Ap '63. (MIRA 16:3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, kafedra neorganicheskoy khimii.
(Acetates--Absorption spectra)

GRIGOR'YEV, A.I.; ORLOVA, Yu.V.; SIPACHEV, V.A.; NOVOSELOVA, A.V.

Vibration spectra of alkali metal fluoberyllates of the type M_2BeF_4. Dokl. AN SSSR 152 no.1:134-136 S '63. (MIRA 16:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
2. Chlen-korrespondent AN SSSR (for Novoselova).
(Fluoberyllates--Spectra)

L 15199-65 EWT(m)/EWF(w)/EPF(n)-2/EWA(d)/EWP(t)/EWP(b) Pu-4 IJP(c)/ASD(m)-3
ACCESSION NR: AT4046854 JD/JG/MLK S/0000/64/000/000/0267/0275

AUTHOR: Grigor'yev, A. I.

TITLE: Effect of alloying elements on the properties of an iron-based austenitic alloy

SOURCE: AN SSSR. Nauchny*y sovet po probleme zharoprochny*kh splavov. Issledovaniya staley i splavov (Studies on steels and alloys). Moscow, Izd-vo Nauka, 1964, 267-275

TOPIC TAGS: austenitic steel, alloy steel, tungsten admixture, niobium admixture, titanium admixture, aluminum admixture, steel mechanical property.

ABSTRACT: The author presents the results of a study of the effects of tungsten (1.44-5.75%), niobium (32.70-36.60%), titanium (0.60-2.90%), and aluminum (0.5-3.45%) on the stress-rupture strength and creep of an iron-based alloy with 12 wt.% Cr, 35 wt.% Ni, and 0.20% C, conducted in 1949-1956 at the Metallurgical Institute. Creep curves obtained by testing the creep resistance of cylindrical specimens, 100 and 200 mm long and 10 mm in diameter, at 650C and 20 kg/mm^2, at creep rates of up to 10^{-5}%/hr, were plotted in a system of semilogarithmic deformation vs time. These tests and tests of cylindrical specimens 25 and 80 mm long and 5 and 8 mm in diameter for stress-rupture strength at 750C were carried out on IP-2, IP-5, and VP-8 machines. Tungsten additions in excess

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L 15191-65
ACCESSION NR: AT4046854

of 4% and niobium additions of up to 2% were found to increase both the creep resistance and stress-rupture strength of this austenitic alloy, and titanium additions of up to 2.2% and aluminum additions to 2.5% were found to produce an optimum effect on these characteristics, titanium being rated as the most effective alloying element. The conclusion is drawn that the strengthening of this alloy is a result of the alloying of a solid solution and formation of carbide and intermetallide phases of optimum dispersion, exerting a strong decelerating effect on plastic deformation. Orig. art. has: 8 figures and 4 tables.

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Metallurgical Institute)

SUBMITTED: 16Jun64 ENCL: 00 SUB CODE: MM

NO REF SOV: 006 OTHER: 004

Card 2/2

ACCESSION NR: AP4012437 S/0078/64/009/002/0320/0329

AUTHORS: Mitrofanova, N.D.; Marty*nenko, L.I.; Grigor'yev, A.I.

TITLE: Hydrates of the rare earth element nitrilotriacetates

SOURCE: Zhurnal neorg. khim., v. 9, no. 2, 1964, 320-329

TOPIC TAGS: rare earth nitrilotriacetate hydrate, composition, structure, rare earth nitrilotriacetate complex, high temperature hydrate, coordinate bond, ionic bond, gravimetric analysis, IR spectrum, x ray spectrum, thermogravimetric analysis, rare earth complex trihydrate, rare earth complex tetrahydrate, rare earth complex pentahydrate, hydrate bond strength, rare earth element

ABSTRACT: The rare earth element nitrilotriacetates form crystalline hydrates of different composition and structure depending on the nature of the central atom and the synthesis conditions. Complexes of the elements of the cerium subgroup and gadolinium form hydrates with 5, 4 and 3 molecules of water while the yttrium subgroup forms on the tetrahydrate. The probability of forming the

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pentahydrate in the cerium subgroup decreases with the element at the end of the subgroup: samarium and gadolinium complexes form the pentahydrate only on salting out with ethanol. The water molecule bond strength is different with different types of hydrates. The aceto groups of the nitrilotriacetic acid are bonded ionically in nearly all the rare earth nitrilotriacetates. In the "high temperature" trihydrates (in which one molecule of water is especially strongly bonded), formed with the complexes of the most basic rare earth elements, La, Pr and Nd, the aceto groups form both coordinate and ionic bonds. The compounds were prepared by ion exchange, by reaction of suspensions of equivalent amounts of Ln_2O_3 and nitrilotriacetic acid, by decantation, and by salting out with organic solvents. The products were analyzed gravimetrically and thermogravimetrically; x-ray and IR spectra were obtained. Orig. art. has: 10 figures and 2 tables.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M.V. Lomonosova Kafedra neorganicheskoy khimii (Moscow State University, Department of Inorganic Chemistry)

Card 2/3

MAKSIMOV, V.N.; GRIGOR'YEV, A.I.

Infrared spectra of basic aluminum acetates. Zhur.neorg.khim. 9 no.4:1023-1024 Ap '64. (MIRA 17:4)

GRIGOR'YEV, A.I.; MAKSIMOV, V.N.

Infrared absorption spectra of the acetates of metals of the 3d group of a periodical table, and their hydrates. Zhur. neorg. khim. 9 no.5:1060-1065 My '64.
(MIRA 17:9)

1. Kafedra neorganicheskoy khimii Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

ORLOVA, T.Yu.; GRIGOR'YEV, A.I.; NOVOSELOVA, A.V.

Beryllium alkoxyacetates. Zhur. neorg. khim. 9 no.5:1141-1143 My '64. (MIRA 17:9)

GRIGOR'YEV, A.I.; TAM VEN'-SYA; KOLLI, I.D.; SPITSYN, Vikt. I.

Infrared spectra of complex compounds of tri- and pentavalent molybdenum with urea and thiourea. Zhur. neorg. khim. 9 no.11: 2585-2589 N '64 (MIRA 18:1)

L 58710-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/EWA(c) Pc-4/Pr-4/Ps-4 RPL WW/RM

ACCESSION NR: AP5016576 UR/0363/65/001/005/0633/0637
541.6

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AUTHOR: Orlova, T. Yu.; Grigor'yev, A.I.; Novoselova, A.V.

TITLE: Alkoxyaluminum acetates

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 5, 1965, 633-637

TOPIC TAGS: aluminum organic compound, alkoxyaluminum compound, heteroorganic polymer

ABSTRACT: By reacting normal aluminum acetate with CH_3OH, C_2H_5OH, C_3H_7OH, and C_4H_9OH, the authors obtained compounds having the composition $Al(OR)_{1.5}(OCOCH_3)_{1.5}$. As in the case of alkoxyberyllium acetates, the ratio of acetate to alkoxy groups is 1:1. The reaction by which alkoxyaluminum acetates are formed is

$$Al(OCOCH_3)_3 + 1.5ROH \rightarrow Al(OR)_{1.5}(OCOCH_3)_{1.5} + 1.5CH_3COOH.$$

All the products obtained were shown to be amorphous by x-ray analysis. They are unstable in air and gradually lose their alcohol groups during storage. Their thermal stability is also low. Infrared spectra show that their structures are similar. An important feature is the preservation of the general pattern of the spectrum and positions of the

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L 58710-65

ACCESSION NR: AP5016576

bands in passing from the solids to their solution in chloroform. Molecular weights of the alkoxyaluminum acetates, measured ebullioscopically, showed that the compounds were high polymers (MW 2500, 3300, and 4500 for the ethoxy, propoxy, and butoxy compounds, respectively). Ethoxyaluminum acetate was also prepared from aluminum ethoxide and glacial acetic acid, and had a molecular weight of 3500. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Khimicheskiy fakul'tet, Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Chemistry Department, Moscow State University)

SUBMITTED: 15Feb65 ENCL: 00 SUB CODE: OC

NO REF SOV: 003 OTHER: 001

dm

Card 2/2

GRIGOR'YEV, A.I.; POGODILOVA, Ye.G.; NOVOSELOVA, A.V.

Ammoniates of Be, Mg, Ca, Al, Sc, Y acetates. Zhur.neorg.khim. 10 no.4:772-779 Ap '65. (MIRA 18:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, kafedra neorganicheskoy khimii.

GRIGOR'YEV, A.I.; [illegible]

Study of certain nitrylotriacetates by infrared spectroscopy. Zhur. neorg. khim. 10 no.6:1409-1418 Je '65. (MIRA 18:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, kafedra neorganicheskoy khimii.

GRIGOR'YEV, A.I.; SIPACHEV, V.A.; NOVOSELOVA, A.V.

Vibration spectra of $Be(NH_3)_4^{2+}$ and $Be(H_2O)_4^{2+}$ ions. Dokl. AN SSSR 160 no.2:383-386 Ja '65. (MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet. 2. Chlen-korrespondent AN SSSR (for Novoselova).

GRIGOR'YEV, [illegible], MITROFANOVA, N. [illegible], [illegible],
[illegible], Vikt. I., akademik

Study of neutral imino diacetates of certain metals by infrared spectroscopy. Dokl. AN SSSR 161 no.[illegible] Ap '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet.

GRIGOR'YEV, A.I.; TUROVA, N.Ya.

Infrared absorption spectra of the alcoholates of beryllium, magnesium and alkaline earth metals. Dokl. AN SSSR 162 no.1: 98-101 My '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet. Submitted November 3, 1964.

TUROVA, N.Ya.; GIRGOR'YEV, A.I.; NOVOSELOVA, A.V.; [illegible] I.G.; GUR'YANOVA, Ye.N.

Structure and properties of the complex compound $BeCl_2.AlCl_3.3(C_2H_5)_2O$. Dokl. AN SSSR 164 no.3:590-593 S '65. (MIRA 18:9)

1. Moskovskiy gosudarstvennyy universitet i Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L.Ya. Karpova. 2. Chlen-korrespondent AN SSSR (for Novoselova).

GRIGOR'YEV, A.I.

Infrared absorption spectra of copper and zinc acetates, their hydrates, and ammoniates. Zhur.neorg.khim. 10 no.11:2499-2503 N '65. (MIRA 18:12)

1. Kafedra neorganicheskoy khimii Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova. Submitted May 12, 1964.

SEMENENKO, K.N.; GRIGOR'YEV, A.I.

Structure of potassium and sodium chloroberyllates.
Zhur.neorg.khim. 10 no.12:2991-2995 D '65.
(MIRA 19:1)

L 34391-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/WW/JG

ACC NR: AP6013741 (A) SOURCE CODE: UR/0192/65/006/006/0919/0921

AUTHOR: Kovba, L. M.; Trunov, V. K.; Grigor'yev, A. I.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Investigation of anhydrous salts of uranyl

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 6, 1965, 919-921

TOPIC TAGS: uranium compound, x ray diffraction analysis, ir spectroscopy, ANHYDROUS, CRYSTAL LATTICE PARAMETER

ABSTRACT: Anhydrous salts of uranyl of the composition UO_2EO_4 (E = S, Cr, Mo, W) were investigated. Anhydrous uranyl sulfate, containing ~5% of SO_4, was obtained during multiple evaporation of uranyl nitrate with concentrated H_2SO_4 and roasting at 600C. Anhydrous uranyl chromate was produced by roasting $UO_2CrO_4 \cdot 5.5H_2O$ to constant weight at 520-550C. The anhydrous uranyl molybdate and tungstate were obtained by baking stoichiometric amounts of U_3O_8, MoO_3, and WO_3, respectively. The single crystals of these uranyl salts were subjected to X-ray diffraction studies and infrared spectroscopy. Their lattice parameters (monoclinic habit, space group $P2_{1/c}$) were determined as follows:

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L 34391-66

ACC NR: AP6013741

	a	b	c	β	N
UO_2SO_4	6.750	5.700	12.80A	103.00°	4
UO_2CrO_4	7.010	5.558	13.43A	104.50°	4
UO_2MoO_4	7.195	5.484	13.58A	104.57°	4
UO_2WO_4	7.207	5.481	13.58A	104.80°	4

This indicated that all these uranyl salts were isostructural. The presence of uranyl sulfate in UO_2SO_4 was ascertained by the strong absorption lines at 1100 and 930 cm^{-1} and by the weaker ones at 856, 831, and 797 cm^{-1}. Uranyl ions had a strong band in the 860-960 cm^{-1} region of the ir spectrum. Orig. art. has: 3 tables.

SUB CODE: 07 / SUBM DATE: 06Jan65/ OTH REF: 001 / ORIG REF: 003/

Card 2/2

ACC NR: AP6027079 SOURCE CODE: UR/0020/66/167/002/0342/0345

AUTHOR: Grigor'yev, A. I.; Novoselov, A. V. (Corresponding member AN SSSR) 72

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet) 5

TITLE: Structure of complex compounds of beryllium oxyacetate with ammonia and primary fatty amines

SOURCE: AN SSSR. Doklady, v. 167, no. 2, 1966, 342-345

TOPIC TAGS: beryllium compound, ammonia, amine, vibration spectrum, hydrogen bonding, molecular structure, IR spectrum, chemical stability, chemical composition, acetate

ABSTRACT: Investigations of the vibration spectra of $Be(OCOCH_3)\cdot 2NH_3$ indicated that the acetate groups in this complex compound are monodendate. Evidently they participate in the formation of a six-membered ring because of the intramolecular hydrogen bond. The authors arrived at this conclusion having studied the infrared absorption spectra of the following compounds $Be(OCOCH_3)_2\cdot 2CH_3NH_2$ and $Be(OCOCH_3)_2\cdot 2C_2H_5NH_2$. Six-membered rings constructed on the basis of the H-bond should impart additional stability to the compound as a result of the action of the entropy factor. From these positions it is possible to explain the structure and also the special stability of the compounds of beryllium oxyacetate with ammonia and amines with the composition of 4 : 1 and 3 : 1. The intramolecular hydrogen bonds play a great role in the formation of the compounds investigated. The vibration spectra of the above beryllium oxyacetate compounds were studied. The spectra of the corresponding compounds of normal beryllium acetate were also studied. The results which confirm the structures proposed will be published later. Orig. art. has: 4 figures. [JPRS: 36,455]

SUB CODE: 07, 20 / SUBM DATE: 09Sep65 / ORIG REF: 007

UDC: 546.45:541.49

Card 1/1

SMIRNOV, V.S. (Leningrad); GRIGOR'YEV, A.K. (Leningrad)

Using dimensional analysis for the determination of transverse deformation in rolling. Izv. AN SSSR. Met. i gor. delo no.5: 92-97 S-O '63. (MIRA 16:11)

SMIRNOV, V.S. (Leningrad); GRIGOR'YEV, A.K. (Leningrad)

Pressure distribution on rolls in thin sheet rolling with large reductions. Izv. AN SSSR. Otd. tekh. nauk Met. i gor. delo no.1:18-21 Ja-F '63. (MIRA 16:3)

(Rolling (Metalwork))

GRIGOR'YEV, A.K.

Compression of thin plastic wedges and some of its applications.
Trudy LPI no.222:102-112 '63. (MIRA 16:7)
(Deformations (Mechanics)) (Wedges)

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.

Stresses during plastic bending with hardening. Trudy LPI no.222:113-123 '63. (MIRA 16:7)
(Sheet-metal work) (Deformations (Mechanics))

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.

Investigating metal deformation on a shape bending machine. Trudy LPI no.222:124-131 '63. (MIRA 16:7)
(Sheet-metal work) (Deformations (Mechanics))

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.

Initial prerequisites for an efficient grooving of shape-bending machine rollers. Trudy LPI no.222:140-147 '63. (MIRA 16:7)
(Sheet metal working machinery)

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.

Reducing strip thickness during plastic bending on a shape bending machine. Trudy LPI no.222:132-134 '63. (MIRA 16:7)
(Sheet-metal work) (Deformations (Mechanics))

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.

Determining the mechanical properties of sheet materials for the calculation of cold deformation processes. Trudy LPI no.222: 135-139 '63. (MIRA 16:7)
(Metals--Testing) (Sheet-metal work)

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.; POPOV, Ye.B.

Manufacture of thin-walled shapes from titanium and its alloys on a shape-bending machine. Trudy LPI no.222:148-150 '63.
(MIRA 16:7)

(Titanium) (Sheet-metal work)

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.

Coiling rolled strips on reels. Trudy LPI no.222:196-200 '63.
(MIRA 16:7)
(Rolling mills--Equipment and supplies)

GRIGOR'YEV, A.K.; DAVIL'BEKOV, N.Kh.

Investigating corresponding conditions of metal rolling in grooves and with smooth rolls. Trudy LPI no.238:56-63 '64. (MIRA 17:11)

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.

Calculating the pressure limit on the rolls of a shape bending machine.
Trudy LPI no.238:68-69 '64. (MIRA 17:11)

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.; BORISOV, V.G.; ROGACHEV, Yu.D.

Cross stretching of strip in the manufacture of large cold-bent shapes. Trudy LPI no.238:64-67 '64. (MIRA 17:11)

SMIRNOV, V.S.; DAVIL'BEKOV, N.Kh.; GRIGOR'YEV, A.K.

Determining metal pressure on the rolls during rolling in diamond passes. Izv. vys. ucheb. zav.; chern. met. 8 no.7:116-119 '65.
(MIRA 18:7)

1. Leningradskiy politekhnicheskiy institut.

SMIRNOV, Vasiliy Sergeyevich, prof.; GRIGOR'YEV, A.K., red.

[Theory of metal working by pressure; summary of lectures for students specializing in the "Plastic working of metals" of the physical metallurgy department] Teoriia obrabotki metallov davleniem; konspekt lekt. dlia studentov spetsial'nosti "Plasticheskaia obrabotka metallov" fiziko-metallurgicheskogo fakul'teta. Leningrad, Leningr. politekhn. in-t, 1965. 227 p. (MIRA 18:12)

1. Chlen-korrespondent AN SSSR (for Smirnov).

GRIGOR'YEV, A.K.

Basic equation in the theory of elastic-plastic bending with an increase in hardness. Trudy LPI no.243:24-37 '65.

(MIRA 18:6)

SMIRNOV, V.S.; GRIGOR'YEV, A.K.; DAVIL'BEKOV, N.Kh.

Coefficients of metal deformation during rolling in a cogging-down pass. Trudy LPI no.243:54-65 '65.

(MIRA 18:6)

SMIRNOV, V.S.; GRIGOR'YEV, A.K.; LUNEV, V.A.

Analyzing increase in width formulas and methods of the experimental investigation of transverse deformation in rolling. Trudy LPI no.243:69-78 '65. (MIRA 18:6)

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.; BORISOV, V.G.

Experimental investigation of surface deformations during plastic bending. Trudy LPI no.243:112-117 '65.

(MIRA 18:6)

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.

Determining the course of shape forming starting from the plastic properties of the blank and the permissible deformation of the section's side edges. Trudy LPI no.243:118-125 '65. (MIRA 18:6)

BOGOYAVLENSKIY, K.N.; GRIGOR'YEV, A.K.; MEL'NICHUK, O.Ya.; IVANOV, N.P.

Investigating power parameters of rolling on mills with swivel bearings. Trudy LPI no.243:126-131 '65.

(MIRA 18:6)

L 00867-66 EWT(d)/EWT(m)/EWA(d)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l)/EWA(c)
TJP(c) JD/HW
ACCESSION NR: AT5013065 UR/2563/65/000/243/0132/0137

AUTHOR: Bogoyavlenskiy, K. N., Mel'nichuk, O. Ya., Grigor'yev, A. K.

TITLE: Force patterns in the rolling of foil on a continuous two-stand rolling mill

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy, no. 243, 1965. Obrabotka metallov davleniyem (Metalworking by pressure), 132-137

TOPIC TAGS: aluminum foil, rolling mill, aluminum rolling, foil production

ABSTRACT: At the Leningradskiy zavod po obrabotke tsvetnykh metallov (Leningrad Nonferrous Metal Works), the rolling of aluminum foil is being carried out for the first time in the Soviet Union in a continuous manner by means of a two-stand rolling mill. A suitable operation of the mill and the correct control and adjustment of its entire system require the knowledge of the various pressures on the rolls. The determination of these pressures was the object of this work. It was found that when the foil is rolled from 0.09 mm to 0.048 mm (width 480 mm), the pressure on the rolls is 47 - 48 t, the specific back tension being 3 - 4 kg/mm^2, and the specific front tension, 2.5 - 3 kg/mm^2. When the foil is rolled from 0.048 to 0.025 mm (width 480 mm), the pressure on the rolls is 46 - 47 t, the

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ACCESSION: AT5013065

specific back tension being 2.5 - 3 kg/mm^2, and the front tension, 3.5 - 4.5 kg/mm^2. The data obtained can be used for the plant operation of the two-stand rolling mill, and also by designers of the mechanical and electrical equipment of continuous foil rolling mills. "Eng. A. N. Trishchevskiy participated in the work." Orig. art. has: 5 figures and 1 table.

ASSOCIATION: Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: IE

NO REF SOV: 003 OTHER: 000

Card 2/2

SMIRNOV, V.S., prof.; GRIGOR'YEV, A.K., kand. tekhn. nauk

Theory of plastic working of metals. Book by I.Ya. Tarnovskiy, A.A. Pozdeyev, O.A. Ganago, V.L. Kolmogorov, V.N. Trubin, R.A. Vaysburd, and V.I. Tarnovskiy; Review. Stal' 25 no.4:348 Ap '65. (MIRA 18:11)

1. Leningradskiy politekhnicheskiy institut. 2. Chlen-korrespondent AN SSSR (for Smirnov).

Acc. Nr. AT6033116 SOURCE CODE: UR/0137/66/000/007/1073/1073

AUTHOR: Bojoyavlenskiy, K. N.; Ris, V. V.; Grigor'yev, A. K.

TITLE: Changes in mechanical properties of sheet molybdenum and niobium in relation to the degree of preliminary deformation

SOURCE: Ref. zh. Metallurgiya, Abs. 7I495

REF SOURCE: Tr. Leningr. politekhn. in-ta, no. 260, 1965, 28-31

TOPIC TAGS: metal deformation, molybdenum, niobium, mechanical property, cold rolling, yield strength, yield point, hardness, elongation

ABSTRACT: An attempt has been made to plot the curves σ_b, $\sigma_{0.2}$, δ, Π_V and the coefficients, establishing the relationship between Π_V, σ_b, and $\sigma_{0.2}$ as a function of the degree cold rolling deformation of (up to $\sim$ 5%). Cast and sintered Mo and Nb were tested. It was shown that there were no changes in σ_b and $\sigma_{0.2}$ of cast Mo with an increase in deformation, while δ decreased from 7 to $\sim$1%. For sintered Mo, δ decreased practically up to 0%, while σ_b and especially $\sigma_{0.2}$ increased almost linearly, reaching about 100 kg/mm^2 at

Card 1/2 UDC: 669.28:620.17+669.293:620.17

ACC NR: AR6033116

ε 55%. In the case of Nb, a sharper decrease of δ was observed for cast material. It was shown that σ_b and $\sigma_{0.2}$ of sintered Nb reach about 75 kg/mm^2 at ε 35% and then remain unchanged. P. Novik. [Translation of abstract]

SUB CODE: 11/

Card 2/2

ALAMPIYEV, P.M., kandidat geograficheskikh nauk, dotsent; GRIGOR'YEV, A.L., kandidat ekonomicheskikh nauk; ZHMUYDA, V.B., kandidat ekonomicheskikh nauk, dotsent; LOYTER, M.N., kandidat tekhnicheskikh nauk; LYALIKOV, N.I., kandidat geograficheskikh nauk, dotsent; NIKITIN, N.P., professor; TUTYKHIN, B.A., kandidat geograficheskikh nauk, dotsent; CHERDANTSEV, Gleb Nikanorovich, doktor ekonomicheskikh nauk, professor; DZHAVAKHISHVILI, A.A., professor; GVELESIYANI, G.G., dotsent; GALKIN, P.D., redaktor; RODIONOVA, F.A., redaktor; SAKHAROVA, N.V., tekhnicheskiy redaktor.

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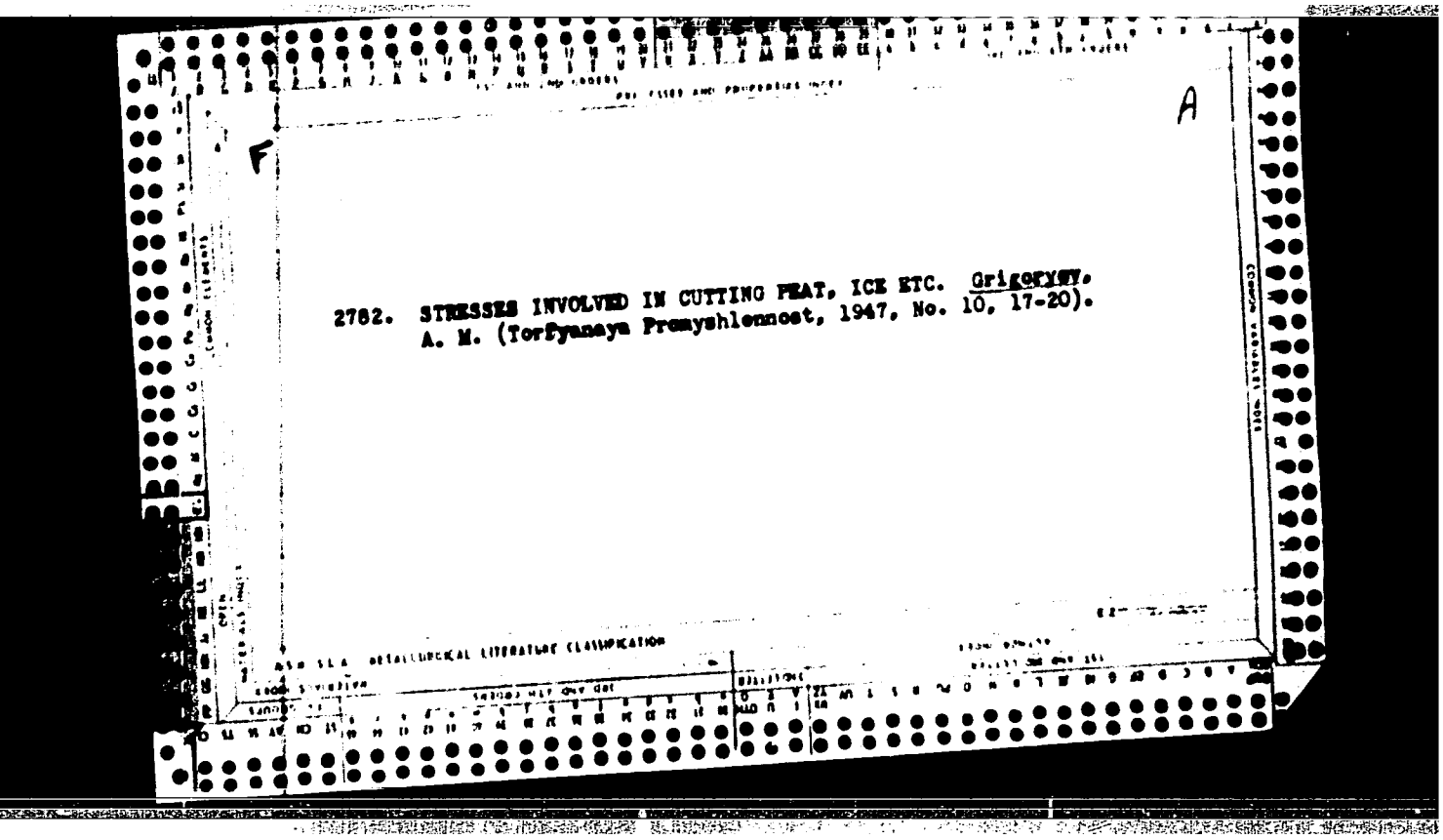

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2458. Grigoriev, A. M., and Rukgaiz, V. Ya., On the application of photoelasticity to determining the stress conditions of drains and slopes (in Russian), *Trudi Kazansk. khim.-tekhnol. in-ta* no. 18, 66-71, 1954; *Ref. Zh. Mekh.* 1956, Rev. no. 1661.

Authors attempt the investigation by photoelastic methods of the strength and stability of slopes, canals, and drains for the case of mechanical excavation of the soil. During their researches, authors assume the soil to be a homogeneous, elastic medium, and conduct their calculations on the basis of the theory of maximum tangent stresses.

In the equation for mechanical similarity presented by the authors, $T_1 = \beta T$, where T_1 is the stress in the soil, T the corresponding stress in the model, and β the ratio of the external pressures applied to the soil and the model, respectively. There is, however, no factor representing the geometrical similarity between the soil and the model. By transformation, authors arrive at the following final form of this equation

$$\sigma_n = \sigma\tau_n/\tau_{s,s}$$

where σ_n = breakdown pressure on the soil, σ corresponding pressure on the model, τ_n limiting strength of the soil in shear, $\tau_{s,s}$ maximum tangent stresses in the model corresponding to the isochromatic stress of the second or third order.

Thus, according to the authors, the breakdown pressure on the soil depends on the value of the denominator $\tau_{s,s}$.

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