

L 19778-66 EWT(1)/EWT(m)/EWP(e)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b) IJP(c)

ACC NR: AT5027916 MJW/JD/HW SOURCE CODE: UR/2536/65/000/062/0022/0029

AUTHOR: Paisov, A. I. (Candidate of technical sciences); Kolpashnikov, A. I. (Doctor of technical sciences, Professor); Tsipulin, I. P. (Engineer); Shelamov, V. A. (Candidate of technical sciences) 70  
BT1

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

TITLE: Dependence of the structure and properties of sintered aluminum powder on the temperature of sintering and the degree of deformation during rolling

SOURCE: Moscow. Aviatsionnyy tekhnologicheskii institut. Trudy, no. 62, 1965. Obrabotka davleniyem legkikh splavov (Pressure working of light alloys), 22-29

TOPIC TAGS: sintered aluminum powder, metal grain structure, ultimate strength, plasticity, plastic deformation, elongation

ABSTRACT: High-temperature sintering of aluminum powder at >500°C, employed with the object of degassing this powder so as to eliminate from it the oxide phase present in a hydrated state within this powder, also has disadvantages of its own since it contributes to the formation of such microstructural defects as striae of structurally free aluminum, bubbles, cracks, and the partial presence of pseudogranular structure (each pseudograin corresponds to a particle of the original lumpy powder). In this connection the authors investigated APS-1 aluminum powder containing 7.1%  
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UDC: 669.7.017:621.97.07

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$\sigma_B$  kg/mm<sup>2</sup>

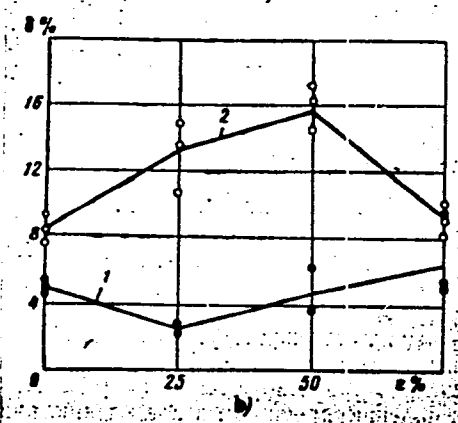
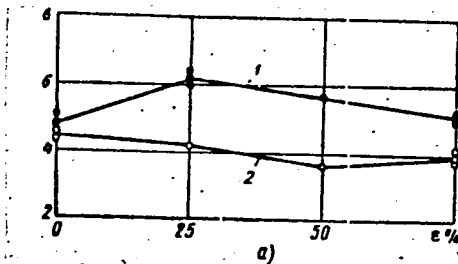


Fig. 1. Effect of degree of cold deformation during rolling on the ultimate strength (a) and relative elongation (b) of SAP; tests at 500°C.

1 - group No. 1; 2 - group No. 2

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ACC NR: AT5027916

Al<sub>2</sub>O<sub>3</sub> and having a bulk weight of 1.4 g/cm<sup>3</sup>. The powder was briquetted at a unit pressure of 40 kg/mm<sup>2</sup>; the briquets were sintered for 8 hr at 600°C (group 1) and 650°C (group 2). The sintered briquets were pressed into blanks at 500°C for 1 min under a unit pressure of 60 kg/mm<sup>2</sup>. The blanks were clad with technically pure Al of a thickness amounting to 5% in proportion to thickness of blank and hot-rolled, by the method proposed by A. I. Kolpashnikov et al. (V sb. Novyye tekhnologicheskiye protsessy pri obrabotke metallov davleniyem, Oborongiz, 1963, pp. 99-103), into 4 mm thick sheets. This was followed by cold rolling with reduction of thickness to 3, 2, 1 and 0.5 mm. Subsequent tests of ultimate strength and plasticity showed that on the whole the SAP specimens in group 1 are stronger but less plastic than the specimens in group 2. Metallographic examination revealed that the structure of SAP in group 2 contains a large number of striae of structurally free Al. By contrast for the SAP in group 1 the number of these striae is extremely limited, which accounts its higher strength and lower elongation. For SAP in group 1 ultimate strength and relative elongation remain relatively unaffected by the degree of deformation during the rolling of sheets, whereas for SAP in group 2, with their relatively large amounts of striae of structurally free Al, tests at 500°C indicated a different pattern of variation in properties: ultimate strength decreased, and elongation increased, in the presence of low and medium degrees of deformation (Fig. 1). This may be explained by the onset of softening in the sectors with structurally free aluminum. Thus, the presence of striae of structurally free Al not only reduces the strength and enhances the elongation of SAP but also affects the pattern of variation in these properties

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ACC NR: AT5027916

according to the degree of cold deformation of the sheets by rolling. Orig. art. has:  
5 figures.

SUB CODE: 11, 13 / SUBM DATE: none/ ORIG REF: 007/ OTH REF: 003

Card 4/4

ULR

ACC FIR: AT5027917

SOURCE CODE: UR/2536/65/000/062/0030/0037 IJP(c) JD

AUTHOR: Paisov, A. I. (Candidate of technical sciences); Kolpashnikov, A. I. (Doctor of technical sciences, Professor); Kotiyeva, L. U. (Candidate of chemical sciences); Serbinovskaya, Ye. L. (Engineer); Shelamov, V. A. (Candidate of technical sciences)

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

TITLE: Transformations occurring in aluminum powder during its heating

SOURCE: Moscow. Aviatsionnyy tekhnologicheskii institut. Trudy, no. 62, 1965. Obrabotka davleniyem legkikh splavov (Pressure working of light alloys), 30-37

TOPIC TAGS: aluminum powder, powder metal production, heating, aluminum oxide, phase composition, metal heat treatment

ABSTRACT: The investigation of the changes in the amount and composition of the oxide phase in heated Al powder is of great interest to the heating of this powder or to its briquetting in heated state, as well as to the heating of cold-pressed briquets to temperatures of 600°C and higher, performed for the purposes of degassing and sintering. The authors performed this investigation on the basis of a method proposed by L. U. Kotiyeva, since the conventional method of determining Al<sub>2</sub>O<sub>3</sub> in Al powder and in sintered Al powder (SAP) according to the difference between the weight of sample

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UDC: 669.017:669.7.017.3

L 15641-66

ACC NR: AT5027917

and the amount of Al metal fails to take into account the possible changes in the composition of the oxide phase due to the hydration of  $Al_2O_3$  and the decomposition of hydrated crystals. Kotiyeva's method is based on determining the content of Al metal by the customary gas-volumetric method and then titrating the solution with  $H_2SO_4$  in order to determine the total amount of Al in the suspension. The difference between the total amount of Al and Al metal reveals the amount of Al bound in oxygen compounds. The amount of  $Al_2O_3$  is then determined by calculating the conditions of the production and storage of Al powder, its oxide phase is represented by  $Al_2O_3 \cdot 3H_2O$ . In the SAP obtained by sintering and pressworking at  $450^\circ-500^\circ C$  the oxide phase is represented by monohydrate of  $Al_2O_3$  ( $Al_2O_3 \cdot H_2O$ ). If the powder or SAP is heated above  $550^\circ C$ , its oxide phase does not contain chemically bound hydrated-crystal moisture ( $\gamma-Al_2O_3$ ). The formation of  $\gamma-Al_2O_3$  is not, however, tantamount to the complete degassing of the material:  $\gamma-Al_2O_3$  is highly hygroscopic and can absorb moisture chemically, which accounts for the presence of considerable quantities of moisture in the residue. The vacuum heating of cold-pressed briquets at the rate of  $50^\circ C/hr$  results in the cessation of gas release only at  $670-680^\circ C$ . In view of the change in the composition (and hence also density) of the oxide phase during heating, the increase in its gravimetric content may be accompanied by a decrease in volumetric content. Further, prior heating in an oxidizing atmosphere for degassing purposes is allowable only in the case of properly nodulized powder; heating of non-nodulized powder leads to rapid increase

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ACC NR: AT5027917

in its content of  $Al_2O_3$ . Thus the purpose of the nodulization of powder lies not only in increasing its pour weight but also in reducing its additional oxidation during hot degassing or hot briquetting. From the standpoint of additional oxidation during heating, the presence of finer fractions in the nodulized powder is undesirable. The currently produced nodulized powder contains a large proportion of finer particles and briquetting of such powder in heated state or the high-temperature sintering of cold-pressed briquets will inevitably augment the nonuniformity of distribution of the oxide phase. Orig. art. has: 6 figures.

SUB CODE: 11, 13 / SUBM DATE: none/ ORIG REF: 009/ JTH REF: 003

PC

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L 21204-66 EWP(e)/EWT(m)/EWP(v)/I/EWP(t)/EWP(k) IJP(c) JD/HM/HW  
ACC NR: AP6001470 (A) SOURCE CODE: UR/0226/65/000/012/0016/0019

AUTHOR: Gil'dengorn, M. S. (Moscow); Shelamov, V. A. (Moscow);  
Raytbarg, L. Kh. (Moscow)

51  
53  
B

ORG: none

TITLE: Peculiarities and new trends in production of half-finished parts from sintered aluminum powder. Report presented at the seventh All Union Conference on powder metallurgy, held 12 to 14 Oct 1964 in Yerevan

SOURCE: Poroshkovaya metallurgiya, no. 12, 1965, 16-19

TOPIC TAGS: sintered aluminum powder, aluminum alloy, argon, arc welding, aluminum plating

ABSTRACT: The authors elaborate on the basic parameters of the technology of obtaining bimetallic tubes from sintered aluminum powder (SAP) material with a plating made of welded aluminum alloy. Constructive units made of such tubes may be joined by contact welding methods along the plating layer. It is shown that sintering SAP at temperatures of 600 to 620C and exposure for 20 to 50 hours (depending on the size of the sintered briquette) yield material with

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2



L 21204-66

ACC NR: AP6001470

low gas saturation, which does not hinder welding by argon-arc-methods.  
Orig. art. has: 3 figures. [Based on author's abstract] [AM]

SUB CODE: 11, 13/ SUBM DATE: 29Oct64/ ORIG REF: 005

Card 2/2 dda

L 4871-66 HAI(m)/EAP(R)/EAP(e)/EAP(t)/EPI LJP(c) JH/IR  
ACC NR: AP6030501 (A) SOURCE CODE: UR/0149/66/000/004/0114/0116

AUTHOR: Perlin, I. L. (Professor); Shelamov, V. A.

ORG: none

TITLE: Notch toughness of SAP (sintered aluminum powder) and Duralumin-type alloys

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 4, 1966, 114-116

TOPIC TAGS: *sintering, metal powder*  
~~sintered~~ aluminum powder alloy, dispersion strengthened metal, metal property/SAP aluminum alloy, D-16 aluminum alloy

ABSTRACT: In order to evaluate the behavior of SAP alloys under conditions of plastic working, a new criterion is proposed. The author introduces "specific notch toughness" ( $b_k$ ), which is a ratio of notch toughness in  $\text{mkg/cm}^2$  to tensile strength in  $\text{kg/mm}^2$ . The temperature dependence of  $b_k$  was determined for five alloys: SAP-1 (6-9% aluminum oxide), SAP-2 (9-13% aluminum oxide), SAP-3 (13-17% aluminum oxide), SAP-4 (17-23% aluminum oxide), and D-16 (see Fig. 1). A significant increase of  $b_k$  begins at different temperatures, depending on the aluminum oxide content of alloys. The pattern of the  $b_k$ -temperature curve reflects the actual behavior of the alloy under conditions of plastic deformation and its actual toughness. For

Card 1/2

UDC: 669.71:621.762.002.62

L 43713-66

ACC NR: AP6030501

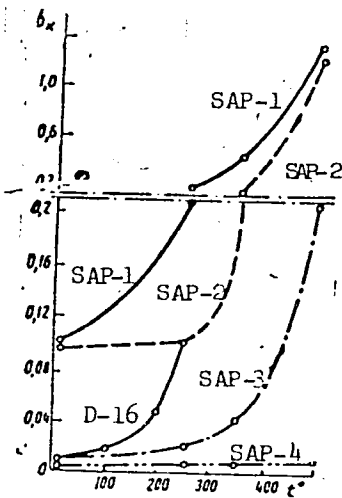


Fig. 1. Temperature dependence of  $b_k$  for SAP and D-16-type alloys.

instance, the  $b_k$  of SAP-3 at 500C has a magnitude identical to that of SAP-1 at 250C, which means that the former alloy requires a higher temperature of plastic deformation than the latter. Orig. art. has: 3 figures. [TD]

SUB CODE: 11/ SUBM DATE: 29Mar65/ ORIG REF: 003/ ATD PRESS: 5075

Card 2/2 hs

ACC NR: AT6024940

(A,N)

SOURCE CODE: UR/2981/66/000/004/0270/0276

AUTHOR: Kishnev, P. V.; Shelamov, V. A.

51

ORG: none

BH

TITLE: Preparation, properties, and structure of hot-extruded and rolled SAP pipes

SOURCE: Alyuminiyevyye splayy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splayy (Heat resistant and high-strength alloys), 270-276

TOPIC TAGS: sintered aluminum powder, pipe / SAP-1 sintered aluminum powder

ABSTRACT: The article describes a process for manufacturing pipes of sintered aluminum powders (specifically SAP-1) and their properties and structure. The main parameters of the process, which provides for sizes and tolerances within the limits of the All-Union State Standard and in accordance with technical specifications for pipes from aluminum and aluminum alloys, are presented. Annealing of the briquets at 660-680°C makes it possible to forge the pipe ends without breakdown or cracking, to carry out fusion welding, and in cold rolling to increase the degree of deformation and the rolling rate. The mechanical properties of found and shaped pipes of SAP-1 (6-9% Al<sub>2</sub>O<sub>3</sub>) are quite stable. The ultimate strength at 20°C is approximately 30 kg/mm<sup>2</sup>, the specific elongation is 8-10%, and at 500°C, 5-7 kg/mm<sup>2</sup> and 4-10% respectively. The use of rod billets for the manufacture of pipes is recommended. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 11/ SUEM DATE: none/ ORIG REF: 004

Card 1/1

L 33142-66 EWT(m)/EWP(e)/EWP(t)/ETI/EWP(k) IJP(c) JD/JH

ACC NR: AP6015352

(N)

SOURCE CODE: UR/0226/66/000/005/0067/0073

AUTHOR: Gladneva, L. I. (Moscow); Yefremenkova, V. I. (Moscow); Lebedeva, L. S. (Moscow); Spivak, G. V. (Moscow); Shelamov, V. A. (Moscow); Yurasova, V. Ye. (Moscow)

ORG: none

61  
B

TITLE: Ascertaining the structure of sintered materials of the  $Mn-MnO$  system by ion bombardment. Report presented at the Fifth All-Union Conference of Electronic Microscopy in Sverdlovsk, July 1965

SOURCE: Peroshkovaya metallurgiya, no. 5, 1966, 67-73

TOPIC TAGS: ~~metal~~, metal oxide system, sintered aluminum powder, powder metallurgy, ~~metal powder~~, electron microscopy, ion bombardment

ABSTRACT: A study of the structure of sintered aluminum powder material by ion bombardment is of practical significance for the investigation of materials obtained by means of powder metallurgy. The method is suggested for use for manufacturing samples prior to electron-microscopic investigations. Analysis of microphotographs shows that the base of SAP material is a cellular grid consisting of oxide particles bounded by aluminum pseudograins. Orig. art. has: 8 figures. [Based on author's abstract.] [AM]

SUB CODE: //, 20/ SUBM DATE: 11 Aug 65/ ORIG REF: 002/ OTH REF: 001

Card 1/1

Division, .

Director, .

Reference and the name of the person. Div. Item. No. 3, 1955.

Monthly List of Russian Acquisitions, Library of Congress  
For 1955. 102.

SHELAMOVA, A.S., KATS, Z.A.; RYZHOVA, M.S., red.; MUSTAFIN, A.M., tekhn. red.

[Methods of briquetting dehydrated potatoes] Rezhimy briketirovaniia  
sushenogo kartofelia. Moskva, Pishchepromizdat, 1957. 40 p.

(MIRA 11:10)

(Potatoes)

(Briquets)

VOLKOV, Ye.N.; SHELAMOVA, A.S.

Improve the quality of dehydrated potatoes and vegetables. Kons.i  
ov.prom. 12 no.9:1-3 S '57. (MLRA 10:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i  
ovoshchesushil'noy promyshlennosti.  
(Vegetables--Drying)



SHELAMOVA, A.S.; SAMSONOVA, A.N.

What we saw at canning and vegetable dehydrating plants in Hungary.  
Kons. i ov. prom. 13 no.4:22-26 Ap '58. (MIRA 11:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i  
ovoshche-sushil'noy promyshlennosti.  
(Hungary--Canning industry) (Hungary--Vegetables--Drying)

SHELAMOVA, A.S.; KATS, Z.A.

Drying apples, apricots, and plums in steam-heated conveyer dryers.  
Kons. i ov. prom. 13 no.7:20-24 JI '58. (MIRA 11:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i  
ovoshchesushil'noy promyshlennosti.  
(Fruit--Drying)

SHELANOVA, A.S.; BUGROVA, L.N.

Demonstration grading of dry potatoes and vegetables. Kons.i  
ov.prom. 15 no.9:46-47 S '60. (MIRA 13:9)  
(Vegetables--Grading) (Potatoes)

SHELANOVA, A.S.; KATS, Z.A.

Packaging of dehydrated vegetables and potatoes by means of vibrating tables. Kons.i ov.prom. 15 no.5:19-21 My '60. (MIRA 13:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti.  
(Vegetables, Dried ->Packaging)

VYSHELESSKIY, A.N.; GORDON, L.I.; GIAGOLEV, K.V.; SHELAMOVA, A.S.; BUGROVA, L.N.

Testing a unit for peeling onions by roasting. Kons.i ov.prom. 15  
no.8:15-17 Ag '60. (MIRA 13:8)

1. TSentral'noye konstruktorskoye byuro trgovogo mashinostroyeniya  
(for Vyshellesskiy, Gordon and Glavolev). 2. TSentral'nyy nauchno-  
issledovatel'skiy institut konservnoy i ovoshchesushil'noy promy-  
shlennosti (for Shelamova and Bugrova).  
(Onions)

SHELAMOVA, A.S.; NAUMOVA, N.A.

Using alkali for the peeling of horse-radish and parsley roots.  
Kons.i ov.prom. 17 no.7:19-20 JI '62. (MIRA 15:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy  
i ovoshchesushil'noy promyshlennosti.

(Root-crops--Preservation)

(Canning and preserving--Equipment and supplies)

SHELAMOVA, A.S.; NAUMOVA, N.A.; SHE LAPUTIN, V.I.; DERBEDENEVA, Z.A.

Dehydrofreezing of fruit and vegetables. Kons. i ov. prom.  
18 no.8:15-18 Ag '63. (MIRA 16:8)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti (for Shelamova, Naumova).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti (for Shelaputin, Derbedeneva).  
(Food, Frozen)

SHELAPUTIN, V.I., kand.tekhn.nauk; DERBEDENEVA, Z.A., inzh.; ~~SHELAMOVA~~, I.S.,  
kand.khim.nauk; NAUMOVA, E.A., inzh.

Dehydrofreezing of vegetables and fruits. Khol.tekh. 40 no.3:30-32  
My-Je '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy  
promyshlennosti (for Shelaputin, Derbedeneva). 2. Tsentral'nyy  
nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'-  
noy promyshlennosti (for Shelamova, Naumova).

(Refrigeration and refrigerating machinery--Research)  
(Food, Frozen)



LEONT'YEVA, K.D.; SHELANKOVA, R.V.

Determining oxidized tellurium in metallic tellurium.  
Sbor. nauch. trad. Gintsvetmeta no.23:383-388 '65.  
(MIRA 18:12)

88506

18.12.10

S/149/61/000/001/012/013  
A006/A001

AUTHOR: Shelanov, V.A.  
TITLE: A Method of Briquetting Aluminum Powders  
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, 1961, No. 1, pp. 134 - 139

TEXT: Results are presented obtained by an investigation of some new methods of producing aluminum powder briquets. The work was carried out under the supervision of B.I. Matveyev, Candidate of Technical Sciences, and Engineer S.I. Nomofilov. Briquets of satisfactory quality and minimum energy consumption were produced using special corrugated aluminum containers (Fig. 1). The process can be conducted on both horizontal and vertical presses. Powder briquetting in containers was made on horizontal hydraulic presses of 750, 1,200, 1,500, 2000 and 5,000 tons force in containers with bushing dimensions of 95, 115, 130, 170, 270 and 306 mm respectively. Briquetting was performed in cold state at a specific pressure from 35 to 85 kg/mm<sup>2</sup> and holding under maximum force from 0 to 5 minutes. Furthermore experiments were made without greasing the container heated to 300 - 400°C; with preliminary greasing of the container with a mixture of water glass

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88506

S/149/61/000/001/012/013  
A006/A001

## A Method of Briquetting Aluminum Powders

and graphite in 2 : 1 proportion; and with greasing in a cold container (20°C). The possibility of facing the briquets without preliminary pressing was tested by briquetting the powder in heated state. P.V. Kishnev, B.G. Borovikov, I.V. Yegorov and Ye.S. Belov participated in the tests, which were made using aluminum powder containing 11% aluminum oxide. Briquetting of heated powder was made in containers on a 1,200-t press at 400°C and specific pressure of up to 100 kg/mm<sup>2</sup>. The process was conducted: a) at slow loading maintaining maximum force for 3 minutes; b) at slow loading up to maximum force without holding; c) at slow three- and fourfold loading to a maximum force without holding; d) at high-speed loading (15 - 20 sec) maintaining the maximum force for 1 - 3 minutes. To study the possibility of obtaining pressed SAF (sintered aluminum powder) articles immediately after briquetting, and in order to investigate the effect of temperature conditions on the sintering quality when heating the briquets, obtained from powders with 15% Al<sub>2</sub>O<sub>3</sub>, they were subjected to multi-stage heating. The briquets were prepared on a 1,200-ton press in cold containers with preliminary filling the powder in paper containers. No lubricant was used. The briquets were then heated in an electric furnace under the following conditions: 1-1.5 hrs at 100 and 150°C; 2 hrs at 200 and 300°C and 1 hr at 400, 450 and 500°C. The temperature was controlled with 2 thermocouples placed in the briquets and in an aluminum alloy ingot.

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A Method of Briquetting Aluminum Powders

S/149/61/000/001/012/013  
ACC6/ACC1

Characteristics of briquets produced by the enumerated methods are given in the table below:

Briquetting method	Force consumed for the pressing out of briquets in % of the full force	Brinell hardness, kg/mm <sup>2</sup>	Density, g/cm <sup>2</sup>
On a vertical press	80	35	2,1
Using metal containers	60/0 <sup>1</sup>	50	2,25
With preheated powder	0	138	2,7
Using paper containers	25/0	115	2,58

<sup>1</sup> numerator - containers without lubricant; denominator with lubricant.

The experimental investigation leads to the following conclusions: The new method of producing SAP briquets with the use of corrugated metal containers yields high

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A Method of Briquetting Aluminum Powders

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A006/A001

quality compact briquets, suitable to further processing by methods applied to pressure working of metals. The dimensions of briquets produced are only limited by the equipment employed. The use of grease promotes an improved quality and increases considerably the efficiency of the press. The new method eliminates the use of special expensive equipment. Briquetting with preheating of the powder produces high-quality briquets, suitable to facing. When paper containers are employed on small presses, the necessity of facing the briquets is eliminated. Multi-stage heating creates optimum sintering conditions, promoting partial burning out of fats, decomposition of aluminum hydroxide and eliminates gases from the briquets. Billets thus obtained can be processed by pressing and rolling.

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88506

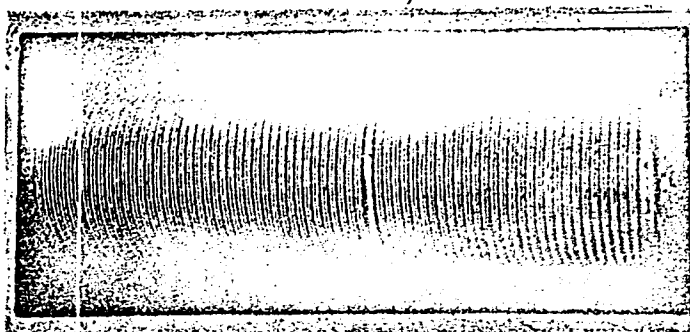
S/149/61/000/001/012/013

A006/A001

A Method of Briquetting Aluminum Powders

Figure 1

Corrugated aluminum container  
for briquetting powder on  
horizontal presses.



There are 5 figures, 1 table and 6 references: 2 Soviet, 1 English, 1 French,  
1 Danish and 1 unidentified. ✓

ASSOCIATIONS: Krasnoyarskiy institut tsvetnykh metallov (Krasnoyarsk Institute of  
Non-Ferrous Metals); Kafedra obrabotki metallov davleniyem (Depart-  
ment of Pressure Working of Metals)

SUBMITTED: May 27, 1960

Card 5/5

OLSUF'YEV, N.G.; TSVETKOVA, Ye.M.; BORODIN, V.P.; KOROLEVA, A.P.; SIL'CHENKO, V.S.; KHOROSHEV, I.G.; MYASNIKOV, Yu.A.; PERFIL'YEVA, Z.A.; KRATOKHVIL' N.I.; VAYSTIKH, M.A.; RAYDONIKAS, O.V.; BARANOVA, N.K.; ZIMINA, V.Ye.; FORMASOVA, L.N.; USTIN-PETROVA, T.F.; AREF'YEV, S.S.; KONKINA, N.S.; KUL'BA, A.P.; MAL'TSEVA, N.K.; SHELANOVA, G.M.; SORINA, A.M.; BRANITSKAYA, V.S.; PRUDNIKOVA, M.N.

Tularin from a vaccinal strain for epicutaneous use. Zhur. mikrobiol.epid. i immun. 27 no.9:22-28 S '56. (MLRA 9:10)

1. Iz Instituts epidemiologii i mikrobiologii im. N.F.Gamalei AMN SSSR i protivotuliaremiynykh stantsiy Stalingradskoy, Voronezhskoy, Tul'skoy, Plavskoy, Omskoy, Krasnodarskoy, Moskovskoy i Smolenskoy. (TULAREMIA, diagnosis, tularin epicutaneous test (Rus))

OLSUF'YEV, N.G.; YEMEL'YANOVA, O.S.; UGLOVOY, G.P.; SIL'CHENKO, V.S.;  
BORODIN, V.P.; SAMSONOVA, A.P.; KONKINA, N.S.; SHELANOVA, G.M.;  
LEVACHEVA, Z.A.; TSAREVA, M.I.; ZYKINA, H.A.; LEBEDEVA, T.F.

Result of mass use with human subjects of dry tularemia vaccine  
prepared from restored Gaiskii No.15 and Emelianova No.155 strains.  
Zhur.mikrobiol.epid. i immun. 29 no.3:52-57 Mr '58. (MIRA 11:4)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AN SSSR,  
Voronezhskoy, Stalingradskoy, Moskovskoy, Tul'skoy oblastnykh, Altayskoy  
krayevoj sanitarno-epidemiologicheskikh stantsii i Omskogo instituta  
epidemiologii i mikrobiologii.

(TULAREMIA, immunology,  
vaccine, dry from Gaiskii's No.15 & Emelianova's No.155  
strains, mass application (Rus)



OLSUF'YEV, N.G.; YEMEL'YANOVA, O.S.; UGLOVOY, G.P.; SIL'CHENKO, V.S.; KHOROSHEV, I.G.; YEZHOVA, Ye.N.; BESSONOVA, M.A.; VEDENEYEVA, Ye. V.; AREF'YEV, S.S.; SHELANOVA, G.M.; SORINA, A.M.; BORODIN, V.P.; KOROLEVA, A.P.; SUVOROVA, A.Ye.; ONIKHEIMOVSKAYA, V.A.; STOLYAROVA, A.D.; BYSTROVA, K.A.; REPINA, R.F.; MYASHNIKOV, Yu.A.; LEVACHEVA, Z.A.; YEGIAZARYAN, K.K.; RAVDONIKAS, O.V.; SARMANEV, A.P.

Optimal periods for testing skin reaction in subjects inoculated against tularemia with a dry live vaccine and vaccinal, reactogenic and immunogenic properties of this preparation. Zhur. mikrobiol. epid. i immun. 32 no.6:92-98 Je '61. (MIRA 15:5)

1. Iz otdela prirodnoochagovykh infektsiy Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR, otdelov Osobo opasnykh infektsiy Voronezhskoy, Leningradskoy, Moskovskoy, Smolenskoy, Stalingradskoy, Tambovskoy, Tul'skoy, oblastnykh sanitarno-epidemiologicheskikh stantsiy i Omskogo instituta epidemiologii, mikrobiologii i gigiyeny.  
(TULAREMIA) (VACCINES)

SHELAPUTIN, V., kand.tekhn.nauk; KAMINARSKAYA, A., kand.tekhn.nauk;  
MARADUDINA, N., inzh.; BORNOVALOVA, A., inzh.; ODINTSOV, A.,  
kand.sel'skokhozyaystvennykh nauk

Frozen prepared foods. Khol.tekh. 37 no.5:39-42 S-0 '60.  
(MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy  
promyshlennosti (for Shelaputin, Kaminarskaya, Maradudina and  
Bornovalova). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut  
torgovli i obshchestvennogo pitaniya (for Odintsov).  
(Food, Frozen)



SHELAPUTIN, V. I.

U S S R .

Effect of low temperature on the preservation of the nutritional value of frozen vegetables, berries, and fruits. V. I. Shelaputin and A. K. Skatchan (A. I. Mikoyan Sci. Res. Inst., Moscow). *Voprosy Pitanija* 12, No. 6, 81-9 (1963). — Changes in the nutritional values of frozen vegetables, berries, and fruits are due mostly to the activities of the oxidizing enzymes, particularly to the activity of peroxidase (I). The rate of the I activity at temps. below 0° follows approx. the Arrhenius equation for the reaction velocities above 0°; however, the temp. coeff. of the reaction continuously increases from 1.32 at 20° to 2.27 at -20°. Exptl. results indicate that the quality of the frozen products depends on the temp. of storage: during at -18° decreases only from 45 to 41 mg. % of vitamin C; during at -12° and -9° from 15 and 9.5 mg. %, while that quant. changes of II are found in the frozen sweet pepper, tomatoes, red and black currants, strawberries, raspberries, and in gooseberries. At -18° no changes take place in the amts. of invert sugar (III), sucrose, and acidity of the red cabbage stored for 12 months. Thus, the temp. of -18° is the optimal freezing temp. for vegetables, berries, and fruits. Based on the chem. and organoleptic characteristics, the storage times at -12° and -9° have been found to be 6-8 and 3-6 months, resp., depending on the product. Special emphasis is put on the storage of per- simmon at -18°. The quality of this fruit, contg. 13% of III, 3.5 mg. % of carotene, and 5-25 mg. % of II, is im- proved during the storage owing to the oxidation of tannin, which constitute approx. 18% of the dry substance. Fruits such as apples, pears, peaches, and apricots on prolonged storage at -18° and following thawing become brown as a result of the actions of their oxidizing systems: II, org. peroxidase, and catechol-tanninase, resp. The amts. of ascorbic acid (in the amt. of 0.05-0.2%) to the fruits preserve the fresh color of the fruits for 1-2 days after thawing.

E. Vierbicki

SHELAPUTIN, V., kandidat tekhnicheskikh nauk; SAATCHAN, A., kandidat biologicheskikh nauk.

Persimmon, a valuable fruit species for freezing. Khol.tekh. 13 no.3:40-42  
J1-S '53. (MLRA 6:11)

(Persimmon) (Fruit, Frozen)

SAATCHEN, A., kandidat biologicheskikh nauk; SHELAPUTIN, V., kandidat  
tekhnicheskikh nauk.

New method of processing tangerines for freezing. Khol.tekh. 30  
no.4:46-48 O-D '53. (MIRA 7:3)

1. VNIKhI.

(Tangerine) (Fruit, Frozen)

SAATCHAN, A., kand. biol. nauk; ~~SHBLAPUTIN, V.~~, kand. tekhn. nauk.

Biochemical processes in frozen fruits. Khol. tekhn. 34 no.4:50-52  
O-D '57. (MIRA 11:1)

(Fruit, Frozen) (Oxidation)

SHELAPUTIN, V.; VYSOTSKAYA, O.

Cooling fresh poultry by means of icing. Khol. tekhn. 35 no.4:70-71  
Jl-Ag '58. (MIRA 11:10)

(Poultry--Storage)



SHELAPUTIN, V.I.; NAMESTNIKOV, A.F.

Bibliographic manual on refrigeration. Kons. i ov. prom. 14  
no.5:46 My '59. (MIRA 12:6)  
(Food industry) (Refrigeration and refrigerating machinery)

ODINTSOV, Andrey Ivanovich; SHELAPUTIN, Viktor Ivanovich; TSIPERSON,  
A.L., red.; MAMONTOVA, N.N., tekhn. red.

[Frozen prepared foods] Zamorozhennye kulinarnye izdeliia. Mo-  
skva, Gostorgizdat, 1961. 38 p. (MIRA 15:12)  
(Food, Frozen)

PISKAREV, A.I.; KHOLOPOVA, A.A.; SHE LAPUTIN, V.I.; NOSKOVA, G.L.;  
ALEKSEYEV, P.A.; DRACHEVA, T.A.; OLENEV, Yu.A.; PAVLOVA,  
I.A.; SELIVANOV, V.A.; VINOGRADOV, S.V.; MIROLYUBOV, P.A.;  
ROVENSKIY, A.I.; SKOROKHODOV, A.A.; RYUTOV, D.G., kand.  
tekhn. nauk. red.; CHICHKOV, N.V., red.; MEDRISH, D.M.,  
tekhn. red.

[Manual on the operation of cold storage warehouses] Spra-  
vochnik po ekspluatatsii kholodil'nykh skladov. Moskva,  
Gostorgizdat, 1963. 175 p. (MIRA 16:7)

1. Sotrudniki Vsesoyuznogo nauchno-issledovatel'skogo insti-  
tuta kholodil'noy promyshlennosti (for Piskarev, Kholopova,  
Shelaputin, Noskova, Alekseyev, Dracheva, Olenev, Pavlova).
2. Rosmyasorybtorg Ministerstva torglovi RSFSR (for  
Selivanov, Vinogradov, Mirolyubov, Rovenskiy). 3. Gosudar-  
stvennyy planovoy komitet Soveta Ministrov SSSR (for Skorokhodov).  
(Cold storage warehouses)

SHELAMOVA, A.S.; NAUMOVA, N.A.; SHELAPUTIN, V.I.; DERBEDENEVA, Z.A.

Dehydrofreezing of fruit and vegetables. Kons. i ov. prom.  
18 no.8:15-18 Ag '63. (MIRA 16:8)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti (for Shelamova, Naumova).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti (for Shelaputin, Derbedeneva).  
(Food, Frozen)

SHELAPUTIN, V.I., kand.tekhn.nauk; DERBEDENEVA, Z.A., inzh.; SHELAMOVA, A.S.,  
kand.khim.nauk; NAUMOVA, N.A., inzh.

Dehydrofreezing of vegetables and fruits. Khol.tekh. 40 no.3:30-32  
My-Je '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy  
promyshlennosti (for Shelaputin, Derbedeneva). 2. Tsentral'nyy  
nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'-  
noy promyshlennosti (for Shelamova, Naumova).

(Refrigeration and refrigerating machinery--Research)  
(Food, Frozen)

SHELAPUTINA, N.

Let's learn how to make the analysis of soil. IUn. tekhn. 5  
no. 2:30-32 F '61. (MIRA 14:5)  
(Soils--Analysis)

ACC NR: AP7000010 SOURCE CODE: UR/0076/66/040/011/2889/2891

AUTHOR: Svetlov, B. S.; Shelaputina, V. P.

ORG: Moscow Chemical Technology Institute (Moskovskiy khimiko-tekhnologicheskii institut)

TITLE: Study of the kinetics of acid hydrolysis of certain polynitrates of polyhydric alcohols

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 11, 1966, 2889-2891

TOPIC TAGS: nitroglycerin, ethylene glycol dinitrate, rocket propellant, propellant, liquid explosive, high explosive, thermal decomposition, *hydrolysis, chemical kinetics, ethylene glycol, nitrate, nitric acid*

ABSTRACT: A study has been made of the kinetics of the homogeneous acid hydrolysis of nitroglycerin and ethylene glycol dinitrate in the presence of small concentrations of dissolved nitric acid and water at 20—80C. It is noted that the capacity of polynitrates toward auto-acceleration of thermal decomposition has been attributed to hydrolysis accelerated by the nitric acid formed. The low reaction temperature (20—80C) was selected so as to minimize self-induced decomposition. A flask of the nitrate with added nitric acid of the desired concentration was placed in a thermostat. Periodically, a sample was withdrawn

Card 1/2

UDC: 542.938:541.124/128

ACC NR: AP7000010

and nitric acid was determined to within  $10^{-6}$  g. It was found that neutral hydrolysis (no  $\text{HNO}_3$  added) of the nitrates occurred at a very low rate if at all. Acid hydrolysis (on addition of  $\text{HNO}_3$  of concentration  $> 10\%$ ) proceeded vigorously and was autocatalytic in character: the rate of formation of  $\text{HNO}_3$  was approximately proportional to the initial  $\text{HNO}_3$  concentration in the mixture (but virtually independent of the water concentration). Comparison of the rates of monomolecular and hydrolytic decomposition showed that the rate of hydrolysis at  $\text{HNO}_3$  concentrations of the order of  $10^{-4}$ — $10^{-3}\%$  is commensurate with the thermal decomposition rate. This confirms that hydrolysis is the main cause of the autoaccelerating decomposition of polynitrates whose decomposition products contain considerable amounts of nitrogen dioxide and water and, hence, nitric acid. Orig. art. has: 3 figures.

[W. A. 68]

[SM]

SUB CODE: 0719, 21/ SUBM DATE: 04Feb66/ ORIG REF: 004/ OTH REF: 001

Card 2/2



24015

S/080/61/034/006/018/020

D247/D305

11.2121

AUTHORS: Andreyev, K.K., Shelaputina, V.P.

TITLE: The influence of the oxides of nitrogen on the dissociation of nitroglycerine

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 6, 1961, 1961 - 1974

TEXT: The oxidizing action of nitrogen dioxide shortens the pre-acceleration period, as do small quantities of water. Although weaker and itself a weak oxidizer, nitric oxide also speeds the dissociation. It was proposed to study the effect of nitric oxide, nitrogen dioxide and water. The experiments were carried out at 60° by the monometric method. Nitroglycerine was twice distilled in a high vacuum and had a fusion temperature of 13.1°. Measured amounts by volume were added to the reaction vessel by cooling with liquid nitrogen. Nitric oxide was formed in a Lunge nitrometer from chemically pure potassium nitrate and sulphuric acid; ni-

Card 1.4

The influence of the ...

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D247/D305

nitrogen dioxide by mixing nitric oxide and oxygen. The gases were dried at 100°. 0.1 % nitric oxide delayed the pressure rise but shortened the acceleration period (13,000 compared to 15,000 mins.) 0.2 % (18 mm) and 0.5 % (132 mm). NO<sub>2</sub> plus slight excess of oxygen caused a greater initial rate of rise of pressure and the acceleration began twice as early in the first experiment and four times as early in the second. The effect of both gases together was greater than the sum of their separate effects. Water plus the two gases virtually obliterated the pre-acceleration period. Thus, with water at 240 mm, 32 mm of nitric oxide and 100 mm of nitrogen dioxide, the pressure reached 200 mm in 127 mins. compared with 14,000 mins for pure nitroglycerine and 24,000 mins. for a similar amount of water. During the dissociation of nitroglycerine in the presence of moderate quantities of water there is a long period of constant pressure followed by a quick fall as a result of the hydrolysis of water to nitric acid; on reaching a minimum, the pressure begins to rise. The period of constant pressure is unaffected by nitric oxide. There is no fall and the rise is much quicker.

Card 2/4

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The influence of the ...

The presence of nitric oxide has no visible effect on processes taking place during the period of constant pressure; the absence of pressure fall is because the solubility of nitrous acid and nitrogen dioxide is much less than that of nitric acid. The subsequent rapid rise of pressure is because the oxidizing action of the oxides of nitrogen and its lower acids is less than that of nitric acid. Thus on warming nitroglycerine in the presence of water, hydrolysis takes place at first to give nitric acid, the process being accelerated by the products of thermal dissociation. On reaching a specific acid level the reaction speeds up and the water is wholly converted to nitric acid which oxidizes the dinitrate or trinitrate to form the oxides of nitrogen and water. The reduction of nitric acid is relatively slow. The oxides of nitrogen, as shown, oxidize quicker than nitric acid and the process speeds up correspondingly. In so far as the oxidation of nitrates is accompanied by the formation of oxides it is self-accelerating. A supplementary factor may be the heat produced during oxidation. Thus, the process can reach very high speeds and may even lead to

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The influence of the ...

explosions at relatively low temperatures (at normal storage temperatures) should the container be too small. Conclusions: 1) Oxides of nitrogen shorten the induction period when nitroglycerine dissociates on heating, nitric oxide acts weakly, nitrogen dioxide more strongly, a mixture of the two is the strongest of all; 2) A triple mixture of water vapor, nitrogen dioxide and nitric oxide is even more effective. 3) During the dissociation of nitroglycerine in the presence of water, nitric oxide prevents the initial fall of pressure, shortens the induction period and speeds up the rate of pressure rise. There are 2 figures and 2 Soviet-bloc references.

SUBMITTED: December 8, 1960

Card 4 4

SHELASHNIKOV, Ye.V., inzh.; GNILITSKAYA, T.G., inzh.

Ceramic pipe fittings. Khim.masinostr. no.2:23-30 Mr-Ap  
'64. (MIRA 17:4)

SHENZHE, P., kand.vet.nauk; SHELASHSKIY, V.A., vetvrach

Veterinary medicine in the Mongolian People's Republic. Veteri-  
nariia 35 no.8:83-84 Ag '58. (MIRA 11:9)

1. Nachal'nik Veterinarnogo upravleniya Ministerstva sel'skogo  
khozyaystva Mongol'skoy Narodnoy Respubliki (for Shenzhe).  
(Mongolia--Veterinary medicine)

1971  
1971  
1971

Center for Disease Control  
Institute for Zoonotic Infections  
Atlanta, Georgia 30333

1. Kazanskiy Veterinarnyy Institut (for affiliation) ...  
2. Kazanskiy Veterinarnyy Institut (for affiliation) ...  
3. Direktoriya Veterinarnoy Politsii (for affiliation) ...

CHENAGINOV, N. N.

Therapeutics, Suggestive

Treatment of dermatoses by hypnosis and therapeutic sleep. Vestn. ven. i dermat., No. 1, 1952.

Monthly List of Russian Acquisitions. Library of Congress. March, 1952. UNCLASSIFIED.



SHELATURKIN, A.K.

Electric weighing machine for petroleum products. Priborostroenie  
no. 12:30 D '60. (MIRA 14:1)

(Weighing machines)

SHELATURKIN, A.K.

Electric strain-gauge dynamometers developed by the Research and Design Institute for Testing Machines and Devices, and Means for Measuring Masses. Pritorostroenie no.8:30-31 Ag '62. (MIRA 15:9)

(Dynamometer)

SHELAVITELEV, A.I., inzhener.

Hinge-lever drilling machine. Rats. i izobr.predl. v stroi.  
no.71:7-9 '53. (MLRA 9:6)  
(Drilling and boring)

1. SHELAYEV, A.
2. USSR (600)
4. Main Turkmen Canal Region - Drainage
7. Biological drainage in the Main Turkmen Canal region, Khlopkovodstvo, 3, no. 1, 1953.

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

SHELAYEV, A.F.

The characteristics of the soils on the left-bank delta part of the river Amu Darya. A. F. Shelaev, N. T. Murav'eva, and I. N. Filitsiant. *Pochvovedenie* 1953, No. 9, 28-39. A description and discussion of the formation and composition of salts associated with takyrs, takyrl-like soils, meadow soils, meadow-bog soils, and methods to be used in ameliorating these soils. J. S. Joffe

SHELAYEV, A.F.; VAYLEKT, G.I.

Shrinkage and erosion in the Amu-Darya Delta. Izv.AN Uz.SSR no.4:33-  
42 '56. (MIRA 14:5)

(Amu-Darya Delta--Erosion)

SHELAYEV, A.F.; KRYUGER, T.P.

Rice cultivation as a method for desalting Solonchaks in central  
Fergana. Izv. AN Uz.SSR no.6:25-34 '56. (MIRA 14:5)  
(Fergana--Solonchak soils) (Rice)

J

Country : USSR  
Category: Soil Science. Cultivation. Improvement.  
Erosion

Abs Jour: RZhBiol., No 14, 1958, No 63138

Author : Shelayev, I. F.  
Inst : Institute of Agriculture, A.S. of Turkmn SSR  
Title : The Desirability of Carrying Silt from the Mu-  
Darya River onto the Irrigated Fields.

Orig Pub: Tr. In-ta zemledeliya. AN TurkmSSR, 1957, 1,  
284-301

Abstract: On the basis of a study of the mechanical and  
mineral composition, of total analyses of the  
deposits and their chemical make-up, and also  
of the humus and total N and P<sub>2</sub>O<sub>5</sub> content in  
the deposits, the author comes to a conclusion about

Card : 1/2



SHELAYEV, A. F.

USSR / Soil Science. Cultivation. Improvement. Erosion.

J-4

Abs Jour : Ref Zhur - Biologiya, No 16, 1958, No. 72743

Author : Shelayev, A. F.

Inst : Not given

Title : Ameliorating Influence of Tree Plantations on the Lands  
of Golodnaya Steppe

Orig Pub : Sots. s.-kh. Uzbekistana, 1957, No 8, 31-34

Abstract : In Golodnaya Steppe, on irrigated sierosems, the most effective biological drainage is observed under walnut-maple, oak-ash and willow-maple types of tree plantations. As associated trees, apple, apricot, cherry, plum oleaster, plum and peach are recommended. -- T. D. Morozova

Card 1/1

37

ZAGER, B.A.; INDREASH, G.; TISHIN, V.G.; SHELAYEV, I.A.; SARANTSEVA,  
V.R., tekhn. red.

[Electron loading of a cyclotron resonator] Elektronnaia zagruzka  
rezonatora tsiklotrona. Dubna, Ob"edinennyi in-t iadernykh issle-  
dovaniy, 1962. 10 p. (MIRA 15:6)  
(Electric resonators) (Cyclotron)

L 11400-63

EWI(m)/BDS AFFTC/ASD

S/120/63/000/002/002/041

54  
53

AUTHOR: Zager, B.A., Indreash, G., Tishin, V.G., and Shelayev, I.A.,

TITLE: Electronic loading of cyclotron resonators 19

PERIODICAL: Pribory i tekhnika eksperimenta, March-April 1963, v. 8,  
no. 2, 20-24.

TEXT: In order to improve the design and operation of cyclotrons, the authors discuss the 25-30 percent loss occurring in voltage on cyclotron D's when the magnetic field is switched on. This phenomenon is connected with avalanches of electrons oscillating between the rims of the D's. After 20-30 hours of aging, layers of carbon form on the rims of the D's and the voltage on the D's increases, but is still closely related to the strength of the magnetic field. The aging time may be decreased by coating the D rims with carbon before operating the cyclotron. Coating of other surfaces where electron avalanches may appear, resulting in a further 7 percent decrease in the power loss in accelerating secondary avalanche electrons. These results were obtained with the U-150 cyclotron.

ASSOCIATION: Ob'yedinenny inst. yaderrykh issledovaniy (Joint Institute for  
Card ~~172~~ Nuclear Research)

PASYUK, A.S.; SHELAYEV, I.A.; GO TSI-TSYAN' [Kuo Ch'i-ch'ien]; TRET'YAKOV,  
Yu.P.

Production of multiply charged neon ions in a pulse source for  
a cyclotron. Prib. i tekhn. eksp. 8 no.5:23-25 S-0 '63.  
(MIRA 16:12)

1. Ob'yedinenyy institut yadernykh issledovaniy.

SHELAYEV, N., agronom-ekonomist

Good silage from clover. Nauka i pered op.v sel'khoz. 9  
no.9:15-16 S '59. (MIRA 13:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki  
sel'skogo khozyaystva.  
(Clover) (Ensilage)

SHEL'DESHEV, M. S.

USSR/Medicine - Penicillin, Therapy  
Medicine - Lungs, Diseases

Oct 48

"The Application of Penicillin in Some Cases of Chronic Pulmonary Diseases," I. T. Stakalo, M. S. Shel'deshev, Krasnodar Kray Sci Res Tuberculosis Inst, Krasnodar, 5 pp

"Klin Med" Vol XXVI, No 10

Describes case of bronchoectasia and two cases of chronic bronchitis in which intratracheal injection of penicillin proved effective.

PA 31/49T25

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SHEL'DESHOVA, G.G.

Biology of the pear codling moth (*Carpocapsa pyrivora* Danil.).  
Uch. zap. IGU no.240:88-121 '58. (MIRA 11:9)  
(Pear--Diseases and pests) (Codling moth)



SHEL'DESHOVA, G.G.

Role of the day-length in the control of the generation  
number and diapause of the codling moth *Laspeyresia*  
*pomonella* L. Dokl. AN SSSR 147 no.2:480-483 N '62.

(MIRA 15:11)

1. Zoologicheskii institut AN SSSR. Predstavleno akademikom  
Ye.N. Pavlovskim.

(Codling moth)

(Photoperiodism)

(Diapause)

HELMSTON, J. P.

11111 ИШУНОВА, М. П. Otsiribiparazitizm shysanus ater Nek na  
Introditsirovannom dlya kor'by s sharvatsom komsteka parasite  
mavulofyrcus s. Doklady Akad. nauk uz SSR, 1949, No. 5, s. 38-44.-  
moskva na usbek. yaz. - Bibliogr: 6 nazv.

NO: Letopis Zhurnal'nykh Statey, No. 29, Moskva, 1949

USSR / General and Special Zoology. Insects. Harmful P  
Insects and Mites. General Problems.

Abstr Jour: Ref Zhur-Biol., No 1, 1959, 2254.

Author : Sheldukova, M. P.

Inst : Chernovits University.

Title : The Pests of Field Cultures in Chernovitskaya  
Oblast'.

Orig Pub: Nauchn. Yezhegodnik. Chernovitsk. un-t, 1956  
(1957), 1, No 2, 126-129.

Abstract: No abstract.

Card 1/1

CATEGORY: GENERAL SCIENCE, ZOOLOGY, INSECTS, Harmful Insects and Mites.

ABS. JOURN.: *Ref. Zhur-Biologiya*, No. 2, 1959, No. 7057

AUTHOR: Shchegoleva, M.F.

INSTIT.: Chernovitsk. un-t.

TITLE: The Fleas *Ceratops (Ceratops) testaceus* in Chernovitskaya oblast.

ORIGIN: *Natura, yezh-godnik. Chernovitsk. un-t*, 1956 (1957), 1, No. 2, 129-133

This species (T) is principally found on man and is distributed in the spring stage. The number of T on spring W (averaging 15-40) and more (rarely) is usually higher. Sometimes the number is greater than in winter W. Occurrence of T is found in the districts of K. and during flowering the number of adult T decreases. In the districts of K. on spring W, the number of T is found on spring W, including the flea (L) *Ceratops testaceus* its



ZHDANOV, M.M.; KOSTRYUKOV, G.V.; ASFANDIYAROV, Kh.A.; MAKSUTOV, R.A.;  
KONDAKOV, A.N.; TURUSOV, V.M.; SILIN, V.A.; PILYUTSKIY, O.V.;  
SHELDYBAYEV, B.F.; PETROV, A.A.; SMIRNOV, Yu.S.; KOLESNIKOV,  
A.Ye.; DROZDOV, I.P.; IVANTSOV, O.M.; TSYGANOV, B.Ya.;  
KORNONOGOV, A.P.; VDOVIN, K.M.; ALEKSEYEV, L.A.; GAYDUKOV, D.T.;  
LIPOVETSKIY, A.Ya.; DANYUSHEVSKIY, V.S.; VEDISHCHEV, I.A.;  
ALEKSEYEV, L.G.; KRASYUK, A.D.; IVANOV, G.A.

Author's communications. Neft. i gaz. prom. no.2:67-68  
Ap-Je '64. (MIRA 17:9)

SHELDYAYAVA, N. S.

"Operator Solutions of Several Problems of Mathematical Physics in Unbounded Regions." *Sov. J. Pure Appl. Math.*, Moscow State Pedagogical Inst imeni V. I. Lenin, Moscow, 1955. (Zh, No 15, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

SHBL'DYAYEVA, M.N.

Vibrations of a membrane having the shape of a semistrip.  
Uch.zap.MGZPI no.3:144-155 '59. (MIRA 13:5)  
(Vibrations)



83526

S/044/60/000/008/018/035  
C111/C222

16.3560

AUTHOR: Shel'dyayeva, M.N.

TITLE: Operator solutions of the Dirichlet problem in unbounded regions

PERIODICAL: Referativnyy zhurnal. Matematika, no.8, 1960, 98,  
abstract no. 8925. Uch. zap. Mosk. gos. zaachn. ped. in-ta.  
Ser. fiz.-matem., 1959, no.3, 155-181

TEXT: The author considers the Dirichlet problem for the elliptic equation with constant coefficients  $u''_{xx} + 2bu''_{xy} + u''_{yy} + cu = 0$  ( $|b| < 1$ ) in the halfstrip  $x > 0, 0 \leq y < \infty$  with the boundary conditions  $u|_{x=0} = f_1(y), u|_{y=0} = f_2(x), u|_{y=\infty} = f_3(x)$ . For  $c < 0$  the solution is sought in the class of the functions which increase slower than  $e^{S_0 x}, 0 \leq S_0 < \sqrt{\frac{1-c}{1-b^2}}$ .

A Laplace transformation with respect to the variable  $x$  reduces the problem to an ordinary differential equation. The "operator solution"  $U(p, x)$  obtained herefrom contains a "superfluous" function - the value of the derivative  $\partial u / \partial x$  for  $x = 0$ . This function is eliminated by demanding formally that the operator solution is regular for  $\text{Re } p > S_0$ .

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Operator solutions of the...

Then for  $b = 0$  the transition from  $U(p,x)$  to the original is carried out, the obtained function  $u(x,y)$  is called a generalized solution of the problem. Furthermore, the author formulates weakened claims for the growth of  $u(x,y)$  for  $x \rightarrow \infty$ , for which the solution is not unique. Claims for the boundary functions are not given. In the last part of the paper, the author considers the spatial analogue of the above problem. X

[Abstracter's note: The above text is a full translation of the original Soviet abstract.]

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SOV/ 93-58-10-7/19

11(0)

AUTHOR: Zoloyev, T.M., Kobeleva, V.A., and Sheldybayeva, N.A.

TITLE: The Rate and Ampleness of Output of the Oil Deposits  
(Tempy i polnota vyrabotki zalezhey nefi)

PERIODICAL: Neftyanoye khozyaystvo, 1958, Nr 10, pp 31-35 (USSR)

ABSTRACT: The Tuymazy Oilfield was discovered in 1944 and the initial estimate of petroleum reserves in the D<sub>I</sub> and D<sub>II</sub> formations was made in 1949. A second estimate was made by the VNII<sub>II</sub> Institute in 1954 and a third by the Tuymazaneft' NPU in 1957. The capacity of the D<sub>I</sub> and D<sub>II</sub> formations are given

in Figs. 1-2 and the production rates in relation to the initial and current estimates of reserves are given in Tables 1-3. The data show that the actual production coefficient for the two formations is 0.43 instead of 0.58 as determined by the initial estimate of the reserves. The low production in relation to the reserves presents a serious problem for the further development of the large Devonian oilfields, but the scientific and research organizations do not bother to analyze the industrial data on the D<sub>I</sub> and D<sub>II</sub> form-

ations. There are 2 figures and 3 tables.

Card 1/1

SHTEINBERG, M. M.

Engn., All-Union Sci. Res. Inst. of Atmospheric Welding, 1968.

"Temperature Effect of the Decomposition of calcium carbide on reaction,"  
Aviation. Engn. No. 6, 1968.

"Acetylene waste on electric generators," Ibid., No. 7, 1968.

VIENNA, A. I.

U.S. INTEL DIVISION - WASHINGTON, DISTRICT OF COLUMBIA

Page 11

Abstract of the Proceedings of the International Conference on "Calcium Oxide and Sulfate," I. I. Chelidze, G. G. Shalizi, A. G. Lytkov, L. L. Chelidze, and others, Zhurnal Khimicheskoi Fiziki, 1965, 35, 10-15

Abstracts of the Proceedings of the International Conference on "Calcium Oxide and Sulfate," I. I. Chelidze, G. G. Shalizi, A. G. Lytkov, L. L. Chelidze, and others, Zhurnal Khimicheskoi Fiziki, 1965, 35, 10-15. Abstracts of the Proceedings of the International Conference on "Calcium Oxide and Sulfate," I. I. Chelidze, G. G. Shalizi, A. G. Lytkov, L. L. Chelidze, and others, Zhurnal Khimicheskoi Fiziki, 1965, 35, 10-15. Abstracts of the Proceedings of the International Conference on "Calcium Oxide and Sulfate," I. I. Chelidze, G. G. Shalizi, A. G. Lytkov, L. L. Chelidze, and others, Zhurnal Khimicheskoi Fiziki, 1965, 35, 10-15. Abstracts of the Proceedings of the International Conference on "Calcium Oxide and Sulfate," I. I. Chelidze, G. G. Shalizi, A. G. Lytkov, L. L. Chelidze, and others, Zhurnal Khimicheskoi Fiziki, 1965, 35, 10-15.

1965

SHELECHNIK, M.M.; STRIZHEVSKIY, B.I.

Material and thermal balance in processes taking place in acetylene generators. Trudy VNIIAvtogen no.1:130-142 '53.  
(MIRA 12:10)

(Acetylene generators)

SheLechnik, M.M. X

USSR :

Rate of isothermal adsorption with varying concentration on adsorbent surface. M. M. SheLechnik. *Appl. Chem. U.S.S.R.* 26, 83-4 (1933) (Engl. translation); *Zhur. Priklad. Khim.* 26, 108-10 (1933).—Math. Equations are derived for the isothermal adsorption rate for the case where the law for variation of gas concns. being adsorbed on the surface of the adsorbent grains is known. A. Fleischer

AD 63

SHELECHNIK, M.M.

Work of a sorbent layer in lowering vapor concentration in gas  
entering an adsorber. Trudy VNIIAvtogen no.3:205-210 '55.  
(MIRA 11:2)

(Adsorption)



USSR/Processes and Equipment for Chemical Industries K-1  
Processes and Apparatus for Chemical Technology

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 14159

Author : Shelechnik M.M.

Inst : Department of Technical Sciences, Academy of Sciences  
USSR

Title : Heating of Dispersed Medium by Gas Flowing Therethrough

Orig Pub : Izv. AN SSSR, Otd. tekhn. n., 1956, No 9, 115-116

Abstract : Equations have been derived for the determination of temperature of dispersed medium and the gas flowing through it, on the assumption that the initial temperature of the medium is an arbitrary function of the length of the chamber.

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137-58-4-6468

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 19 (USSR)

AUTHOR: Shelechnik, M. M.

TITLE: The Function of the Calcium Carbide Layer in Drying Moist Gas (Rabota sloya karbida kal'tsiya pri osushke vlazhnogo gaza)

PERIODICAL: Tr. Vses. n. -i. in-ta avtogen. obrabotki metallov, 1957, Nr 4, pp 147-154

ABSTRACT: Laboratory experiments and analytical calculations show that  $\text{CaC}_2$  is an effective drying agent for air blast in metallurgical processes.  $\text{C}_2\text{H}_2$ , a highly calorific substance, forming  $\text{CaC}_2$  on hydrolysis, is introduced into the blast for drying purposes. The drying of the  $\text{C}_2\text{H}_2$  by means of  $\text{CaC}_2$  represents additional production of  $\text{C}_2\text{H}_2$ . Under laboratory conditions,  $\text{CaC}_2$  dries gas to a dew point of  $-50^\circ$ . The temperature within the column at a reduced gas velocity of  $100 \text{ kg/m}^2/\text{hr}$  is below the  $\text{C}_2\text{H}_2$  polymerization temperature. Bibliography: 12 references.

V. S.

Card 1/1 1. Gases--Drying processes 2. Calcium carbide--Work functions

SHELECHNIK, M.M.

Water absorption from humid gases by calcium carbide. Zhur.prikl.  
khim. 30 no.1:164-167 Ja '57. (MLRA 10:5)  
(Calcium carbide) (Acetylene) (Absorption)

Drying Acetylene by Calcium Carbide

135-58-5-13/17

There are 2 figures and 4 references, 3 of which are Soviet  
and 1 Japanese.

ASSOCIATION: VNIIAvtogen.

AVAILABLE: Library of Congress

Card 2/2

*Shelechnik, M. M.*

USSR/Fluid Mechanics

Abs Jour: Ref Zhur Mekhanika, No 1, 1958; 9019

Author : Shelechnik, M. M.

Inst :

Title : On the heating of a dispersed medium by a gas flowing through it.

Orig Pub: Izv. AN SSSR, Otd. tekhn. n., 1956, No 9, 115-116

Abstract: The problem of determining the temperatures of the dispersed medium (in some container) and of a gas flowing through it, in the case when the initial temperature of the medium is an arbitrary function of the length of the container, and the temperature of the gas at the entrance to the container is constant. The problem is solved by an operation method. The solution obtained is valid also for the case of constant initial temperature of the medium and a variable temperature of the gas entering the container.

Card 1/1

*5 N 1 2 3 4 5 6 7 8 9 10 11 12*  
ANTONOV, I.A., kand.tekhn.nauk; ANTOSHIN, Ye.V., inzh.; ASINOVSKAYA, G.A.,  
inzh.; VASIL'YEV, K.V., kand.tekhn.nauk; GUZOV, S.G., inzh.; DEYKUN,  
V.K., inzh.; ZAYTSEVA, V.P., inzh.; KAZBEKOV, P.P., inzh.; KARAN,  
Yu.B., inzh.; KOLTUNOV, P.S., kand.tekhn.nauk; KOROVIN, A.I., inzh.;  
KRZHEGHOVSKIY, A.K., inzh.; KUZNETSOVA, Ye.I., inzh.; MATVEYEV, N.N.,  
tekhnik; MOROZOV, M.Ye., inzh.; NEKRASOV, Yu.I., inzh.; NECHAYEV,  
V.D., kand.tekhn.nauk; NINBURG, A.K., kand.tekhn.nauk; SPEKTOR, O.Sh.,  
inzh.; STRIZHEVSKIY, I.I., kand.khim.nauk; TESMENITSKIY, D.I., inzh.;  
KHROMOVA, TS.S., inzh.; TSEUNEL', A.K., Inzh.; SHASHKOV, A.N., kand.  
tekhn.nauk, dots.; SHELECHNIK, M.M., inzh.; SHUKHMAN, D.Ya., inzh.;  
EDEL'SON, A.M., inzh.; VOLODIN, V.A., red.; UVAROVA, A.F., tekhn.red.

[Machines and apparatuses designed by the All-Union Institute of  
Autogenous Working of Metals] Mashiny i apparty konstruksii  
VNII Avtogen. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi  
lit-ry, 1957. 173 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii  
institut avtogennoi obrabotki metallov, no.9)  
(Gas welding and cutting--Equipment and supplies)

AUTHOR: Shalaginik, N. M.

74-1-03/32

TITLE: Temperature Distribution in a Reaction Column for Processes Proceeding in the Range of Diffusion Kinetics (Rasprezhaleniye temperatur v reaktsionnoy kolonke dlya protsessov, protexayushchikh v difuzionnoy oblasti)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1972, Vol. 32, Nr 1, pp.152-156 (USSR)

ABSTRACT: Here, the attempt is made to solve approximately the question of the temperature course in a reaction column, if it takes place in the diffusion range, i.e. if the diffusion resistance is essentially greater than the chemical one. For this purpose the temperature course in a column filled with a solid granulated substance is investigated. A gaseous mixture is blown through this solid substance, wherein one of the mixture components reacts with the column filling. For the purpose of a first approximation it is assumed that the duration of the layer-pore life-effect is proportional to the layer length, and that the gas is in interaction with the column filling with an infinitely great velocity. I.e. the absorption process is instantly finished. The conception of the expansion velocity of the "heat wave"  $v = 3C_{\text{eff}} / \gamma C_{\text{eff}}$  - of a linear velocity is introduced.  $\gamma$  denotes the amount of gas supplied per

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71-1-13/32

Temperature Distribution in a Reaction Column for Processes Proceeding in the Range of Diffusion Kinetics

the unit and per column-cross-section-unit in  $\text{kg}/\text{m}^2$  per hour.  $\gamma$  is the porosity of the filling,  $\rho$  is the density of the column in  $\text{kg}/\text{m}^3$ .  $C_1$  and  $C_2$  denote the specific heat of the head-piece, and of the gas, respectively, in  $\text{kcal}/\text{kg} \cdot \text{C}$ .  $w$  denotes the linear velocity of treatment of the column-filling-mass, measured in  $\text{m}/\text{hour}$ .  $u$  is that velocity,  $b$ , which the front of the heated head-piece would be displaced in the case that the heat would be essentially dissipated by the gas to the head-piece, and that the head-piece would heat up to the gas temperature. The ratio  $\eta = u/w$  characterizes the three possible kinds of temperature distribution in the column: the gas most frequently occurring in practice  $u > w$  and the two other cases  $u < w$  and  $u = w$ . It is shown that, if the propagation velocity of the "heat wave" is greater than the propagation velocity of the reaction front, the temperatures of the gas and of the head-piece at the moment of the passage of the reaction through the layer compensate each other, and according to the reaction the head-piece obtains an essentially higher temperature. In the inverse case the gas temperature at the moment of the beginning of reaction is higher than the head-piece temperature, and both temperatures compensate each other after the reaction. At  $u = w$  the quantity  $\Delta/(\eta - 1)$  tends toward infinity, and at

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76-1-23/32  
Temperature Distribution in a Reaction Column for Processes Proceeding in the  
Range of Diffusion Kinetics

unlimited heating of the column content is possible. The temperature distribution found here only qualitatively shows the real phenomenon. Here, no special assumptions concerning the substances reacting were made. The solutions given here may be improved, if equations for concrete processes are used. There are 4 figures, and 5 references, 4 of which are Slavic.

- ASSOCIATION: Institute of Autogenous Treatment of Metals, Moscow  
(Institut avtogennoy obrabotki metallov, Moskva)
- SUBMITTED: November 1, 1956
- AVAILABLE: Library of Congress

Card 3/3

SOV/76-33-9-29/37

R(4)

AUTHOR:

Shelechnik, M. M.

TITLE:

Temperature Distribution in a Column During a Reaction of First Order

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3,  
pp 2073 - 2075 (USSR)

ABSTRACT:

The author investigated the temperature conditions prevailing in the layer of a disperse solid substance through which a gas mixture passes, one of the gases reacting with the column content rigorously according to the equation of first order. This indicates that within a short period a steady temperature distribution occurs as defined by the following equations:

$$t_G = \frac{rH_0}{C_G} (1 - e^{-k_c x/G}), \quad t_S = \frac{rH_0}{C_G} \left[ 1 - \left(1 - \frac{C_G k_0}{\alpha_0}\right) e^{-k_0 x/G} \right]$$

where  $t_G$  and  $t_S$  denote the temperature of the gas and the column content,  $r$  the heat emitted by the reaction of one unit of gas mass with the column content,  $H_0$  the amount of the reacting gas per unit of carrier gas up to its entrance into the column,  $C_G$  the specific heat of the gas,  $G$  the amount of carrier gas passing per unit of time through one unit of area of the column section,

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Temperature Distribution in a Column During a Reaction of First Order SOV/76-83-9-29/37

$x$  — the distance from the point where the gas enters the column,  
 $k_0$  — the constant of diffusion rate of the reacting gas with respect to the surface of one  $m^3$  of the column content,  $\alpha_0$  — the coefficient of heat emission of the gas with respect to the surface of one  $m^3$  of the column content. Unlike a process described in a previous article (Ref 2), in which the temperature maximum was shifted along the column at a definite velocity, temperature rises here continuously in each cross section and tends to a final value. There are 1 figure and 2 Soviet references.

SUBMITTED: March 10, 1958

Card 2/2

SHELECHNIK, M.M., inzh.

Radiant heating of particles in metallization and gas-flame  
spraying of plastics. Trudy VNIIAvtogen no.6:110-113 '60.  
(MIRA 13:8)

(Metal spraying) (Plastic spraying)