It Is Necessary to Improve the Construction and the Quality of the Production of the УМ-5 (UM-5) Testing Machine

S/032/6 /026/012/033/036
B020/P056

(Administration of Metalworking and Machine Tool Industry of the Sovnarkhoz of the Krasnodar Economic Rayon)

Card 3/3

DAVYDOV, V.

Initiators of good deeds. Sov.shakht. 10 no.3:9 Mr '61. (MIRA 14:7)

(Coal mines and mining)

DAVYDOV, V.; KUPRIYENKO, A.

Let's simplify financial planning for restaurant stores and trusts. (MIRA 14:7)
Sov.torg. 34 no.7:26-28 Jl '61.
(Restaurants, lunchrooms, etc.)

ZAYFFERT, K.; DAVYDOV, V.

Centralized freight haulage in socialist countries. Avt.transp. 39 no.9:58 S '61. (MIRA 14:10)
(Communist countries--Transportation, Automotive)

DAVYDOV, V., kand.tekhn.nauk (g.Ivanovo)

Wear-resistant mittens. Okhr.truda i sots.strakh. 4 no.12:27 D '61. (MIRA 14:11)

(Gloves)

DAVYDOV, V., kand.tekhn.nauk (g. Ivanovo)

Protective clothing should be made out of impregnated materials. Okhr.truda i sots.strakh. 5 no.4:27 Ap '62. (MIRA 15:4)
(Ivanovo—Clothing, Protective)

DAVYDOV, V.

Mars. Av. i kosm. 45 no.11:11-15 '62. (MIRA 15:11)

1. Uchenyy sekretar' Gosudarstvennogo astronomicheskogo instituta imeni Shternberga.
(Mars (Planet))

DAVYDOV, V., doktor tekhn. nauk.

New system of measurement units. Rech. transp. 23 no.1: 48-53 Ja '64. (MIRA 18:11)

Dawydoff, Wladimir

CITIZENSHIP - USSR

7

The solubility and behavior of polycaprolactams in hot primary aryl alcohols and cresol. Waldemar Dawydoff (Leuna Werke, Wollen, Ger.). *Faserforsch. u. Textiltech.* 4, 412-17(1953).—Perlon samples (I), prepd. by heating a mixt. of 44 g. ε-caprolactam and 1.33 g. ε-aminocaproic acid in a CO_2 atm. 9 hrs. at 240-50°, are insol. in EtOH, cyclohexanol, and 1-phenylethanol, sol. in PhOH, cresol, xylenol at low temps., in liquid 1- and 2-$C_{10}H_7OH$, and o-, m-, and p-$C_6H_4(OH)_2$, and in hot $PhCH_2CH_2CH_2OH$, $PhCH_2CH_2OH$, and $PhCH_2OH$. Under the conditions necessary for the soln. of polymerized I in $PhCH_2OH$ and in $PhOH$-H_2O and cresol-H_2O, I may be recovered without appreciable change in the degree of polymerization. However, when the solns. are kept at a high temp. for a long time appreciable depolymerization may take place. Extn. of low mol. wt. components from I by solvents is discussed. F. B. Brauns

: USSR

CATEGORY : Cultivated Plants. Grains. Leguminous Grains. Tropical Cereals.

ABS. JOUR : Ref Zhur-Biologiya, No. 5, 1959, No. 22209

AUTHOR : Krasnyuk, A.A.; Davydov, V.A.

INST. : -.-

TITLE : Improving Seed Managment of Grain Crops in the South-East.

ORIG. PUB.: S.-kh. Povolozhya, 1958, No.8, 41-44

ABSTRACT : No abstract

CARD: 1/1

21.1330,24.7600

77238
SOV/89-8-2-3/30

AUTHORS: Bochvar, A. A., Sergeyev, G. Ya., Davydov, V. A.

TITLE: Deformations of Uranium Subjected Simultaneously to Thermal Cycles and Tensile Stresses

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 2, pp 112-116 (USSR)

ABSTRACT: Method of Investigation. Figure 1 represents the special device operating under vacuum of the order of 10^{-5} mm Hg. Temperature control was automatic and the residual deformation of uranium was studied by measuring the size of the samples after (1) the cyclic thermal treatment without outside stresses (a freely hanging specimen of small weight); (2) creep investigation at the maximum cycle temperature for intervals of time equal to the cycling time in the next part; and (3) cycling thermal treatment with tensile stresses equal to those in part (2). Sample temperatures were measured at three points by means of thermocouple welded to it. The temperature drop across the sample

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Deformations of Uranium Subjected Simultaneously to Thermal Cycles and Tensile Stresses

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was between 5 and 10° C. Under investigation were samples of granular sheet uranium (rolled in the α -phase region), and uranium annealed in the γ -phase region (randomly oriented crystals). All samples were flat, of an overall length of 100 mm (working length, 40 mm; width, 8 mm). Thickness of the samples A, B, C was 2.3, 2.2, and 3.2 mm respectively. Samples Cut Across the Direction of Roll. Tables 1 and 2 summarize all the results obtained from the cross-cut samples. Samples Cut Along the Direction of Roll. Results are summarized in Table 3. Samples With Random Orientations of Crystallites. (See Table 4.) One sees in all cases that in the case of simultaneous influence of cyclic thermal treatment and tensile stress there is a considerable increase of the length variation of the samples compared to the creep caused by simple tension. This happens even in cases when the stress effect and that due to the thermal cycling are of opposite sign. There are 4 tables; 5 figures; and 4 references, 1 Soviet, 2 U.K., 1 U.S. The U.K. and U.S. references are: A. McIntosh, T. Heal, Paper Nr 49 Submitted by Great Britain to the Second Intern.

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Deformation of Uranium Subjected Simultaneously to Thermal Cycles and Tensile Stresses

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SOV/89-8-2-3/30

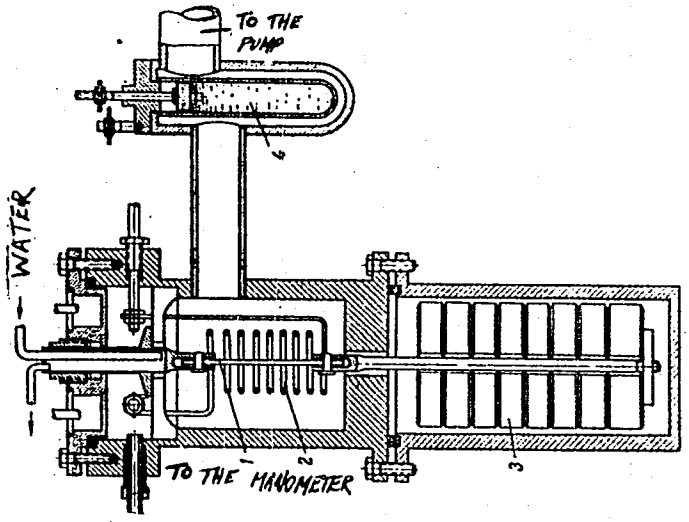

Fig. 1. Diagram of the device: (1) sample (2) molybdenum heater; (3) load; (4) liquid nitrogen trap.

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Table 1. Relationship between constant applied stress and residual deformation of uranium during cyclic thermal treatment and after creep tests (samples out crosswise to the direction of rolling).

TREATMENT	CONSTANT APPLIED STRESS G kg/mm²	RESIDUAL ELONGATION OF SAMPLES					
		AFTER 140 CYCLES IN THE INTERVAL 180–550° C*			AFTER CREEP TESTS AT 530° C (WITHOUT THERMAL CYCLES)**		
		Nr of SAMPLE	Δl, mm	δ, %	Nr of SAMPLE	Δl, mm	δ, %
SAMPLE B, ROLLED AT 300° C WITH 60 % REDUCTION	0	54	−0.32	−0.8	—	—	—
	0.8	52	+0.67	+1.67	53	+0.1	+0.25
SAMPLE A***, ROLLED AT 300° C WITH 70% REDUCTION	0.	34	−0.5	−1.25	—	—	—
	1.25	36	+1.9	+4.8	37	+0.44	+1.1
SAME, WITH ANNEALING AT 575° FOR 2 HR	0.	41	−0.65	−1.65	—	—	—
	1.25	40	+2.6	+6.5	39	+0.08	+0.2

* HEATING TIME 1.5 MIN, COOLING TIME 4 MIN

** TESTS CONTINUED 3 HR; THIS WAS THE TIME DURING WHICH SAMPLES STAYED AT TEMPERATURES HIGHER THAN 350°C WHILE SUBJECTED TO 200 THERMAL CYCLES.

*** RESIDUAL ELONGATION OF SAMPLES A IS SPECIFIED AFTER 200 CYCLES.

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Table 2. Relationship between constant applied stress and residual deformation of rolled uranium during cyclic thermal treatment and after creep tests (samples cut crosswise to the direction of rolling).

TREATMENT	CONSTANT APPLIED STRESS G, kg/mm²	RESIDUAL ELONGATION OF SAMPLES			
		AFTER 140 CYCLES*		AFTER CREEP TESTS AT 530°C (WITHOUT THERMAL CYCLES)**	
		Δl, mm	δ %	Δl, mm	δ %
MELT R, ROLLED AT 500°C WITH 85% REDUCTION	0	− 0.93	− 2.32	—	—
	1	+ 0.82	+ 2.05	+0.5	+1.2
	2	+ 3.77	+ 9.42	+1.1	+2.7
	3	+ 5.32	+13.3	—	—

* HEATING TIME, 1.5 MIN; COOLING TIME, 4.5 MIN; TIME FOR 1 CYCLE, 5.5 MIN

** TESTS CONTINUED FOR 14 HR

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Table 3. Relationship between the constant applied stress and the residual deformation of the rolled uranium during cyclic thermal treatment and after creep tests (samples cut along the direction of rolling).

TREATMENT	CONSTANT APPLIED STRESS σ, kg/mm²	RESIDUAL ELONGATION OF SAMPLES AFTER 140 CYCLES IN THE INTERVAL 180-550°C		RESIDUAL ELONGATION OF SAMPLES AFTER CREEP TESTS AT 550°C (WITHOUT THERMAL CYCLES)**	
		Δl, mm	δ, %	Δl, mm	δ, %
MELT B, ROLLED AT 300°C WITH 60% REDUCTION	0	0.33	0.8	—	—
	0.8	0.84	2.1	0.1	0.25
	2.0	3.44	8.6	0.72	1.8
	3.0	6.31	15.8	1.2	3.0
	4.0	25.52	63.8	3.42	8.4

* HEATING TIME 1.5 MIN, COOLING TIME 4 MIN

** TESTS CONTINUED 14 HR

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Table 4. Relationship between constant applied stress and residual deformation during cyclic thermal treatment and after creep tests of uranium annealed in the γ-phase

TREATMENT	CONSTANT APPLIED STRESS σ, kg/mm^2	RESIDUAL ELONGATION OF SAMPLES			
		AFTER 100 CYCLES IN THE INTERVAL 180-550°C*		AFTER CREEP TESTS AT 550° C (WITHOUT THERMAL CYCLES)**	
		Δl, mm	δ, %	Δl, mm	δ, %
SAMPLE C ROLLED AT 300° C WITH 60% REDUCTION AND ANNEALED AT 850° C FOR 30 MIN	0	+ 0.17	+ 0.4	—	—
	1	+ 0.67	+ 1.6	+0.1	+0.25
	2	+ 1.22	+ 3.05	+0.12	+0.30
	2.7	+ 2.51	+ 6.27	+0.36	+0.9

* HEATING TIME 3 MIN; COOLING TIME 4 MIN; TIME OF THE CYCLE 7 MIN

Card 7/8 ** TESTS CONTINUED 14 HR

Deformation of Uranium Subjected Simultaneously to Thermal Cycles and Tensile Stresses

77238
SOV/89-8-2-3/30

Conf. for Peaceful Use of Atomic Energy (Geneva, 1958); R. Nichols, Nucl. Engng, 2, Nr 18, 355 (1957); A. Roberts, A. Cotrell, Philos. Mag., 1, 711 (1956).

SUBMITTED: October 8, 1959

Card 8/8

DAVYDOV, V.A.; IVANOV, V.G.

Quality of pipe cast by the semicontinuous method in relation to the gas content of cast iron. Lit. proizv. no.3:6-8 Mr '64. (MIRA 18:9)

34514
S/659/61/007/000/001/044
D217/D303

21.2110
18.8200 also 2408

AUTHORS: Bochvar, A.A., Sergeyev, G.Ya., Davydov, V.A., and Zhul'kova, A.A.

TITLE: Influence of cyclic heat treatment under a constantly applied load on the dimensional stability of metals and alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 7, 1961, 3 - 10

TEXT: Flat specimens of identical shape, and overall length 100 mm (length of working portion 40 mm, width 8 mm, thickness 2 mm), made from uranium, aluminum, zinc and from copper-zinc alloys of different compositions, were used for the investigation. The uranium specimens were tested without protection against oxidation, heating being carried out in air and quenching in water. The specimens were subjected to cyclic heat treatment in the temperature ranges 180 - 550°C and 490 - 720°C for uranium 20 - 400°C for aluminum, 20 - 300 °C for zinc and 20 - 600°C for copper-zinc alloys. The temperatures

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of specimens were controlled at these points by means of thermocouples welded onto the specimens. The magnitude of the residual deformation of the specimens was determined (1) after cyclic heat treatment without application of external load; (2) after cyclic heat treatment with application of a tensile load during the heat treatment cycle; (3) after creep tests at a temperature equal to the upper temperature of the cycle. The duration of the latter tests was that of the full period of the heat treatment cycle, multiplied by the number of cycles (the load during cyclic thermal treatment under load and in the creep tests being identical). Texturized uranium rolled in the α-phase region and untexturized uranium annealed in the γ-phase region and quenched from the β-phase region, were tested. Specimens of texturized uranium were cut along the direction of rolling and at right angles to it. It was found that as the result of applying a small tensile load to uranium, aluminum, zinc, α and β brass during cyclic heat treatment, a considerable residual deformation developed; this exceeded the total deformation due to creep and cyclic heat treatment without application of load, by a considerable extent. Cyclic thermal treatment of transfer specimens

of texturized uranium sheet in the α-phase temperature range, and also of β-brass, in the absence of tensile load causes a shortening of the specimens, and on application of a small external tensile load it leads to a considerable elongation in the direction of the acting force. As a result of cyclic thermal treatment of uranium at a constant load, the residual plastic deformation on passing through the $\alpha \rightleftharpoons \beta$ phase transformation point is greater than deformation as a result of cyclic thermal treatment within the α-region. In α + β brass the residual deformation brought about as a result of testing for creep only, considerably exceeds the deformation under the influence of cyclic thermal treatment with a constantly applied load. The change in dimensions of the specimens is in the direction of the action of the externally applied load. The considerable change in the magnitude of residual deformation and even in the sign of deformation as a result of the action of small stresses, applied to the specimen during cyclic thermal treatment, is due, in the authors' view, to the fact that on applying a constant tensile load to a specimen submitted to cyclic thermal treatment, the initial stage of the first period of creep, in which the material exhibits a higher rate of deformation, is repeated; this is also promoted by

the great mobility of atoms at points in the thermal cycle during which temperature gradients and stresses exist, and also on passing through the $\alpha \rightleftharpoons \beta$ phase transformation point. There are 12 figures, and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: A.H. Cottrell, Met. Rev., 1, 1956; A.C. Roberts, and A.H. Cottrell, Phil. Mag., 1, 18, 1956; R.W. Nichols, Nuclear eng., 2, 18, 1957.

X

SHIYAN, V.G.; DAVYDOV, V.A.

Expansion of pipe production from high-strength cast iron.
Metallurg 6 no.11:27-29 N '61. (MIRA 14:11)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.
(Pipe, Cast iron)

GORA, A.M.; DAVYDOV, V.A.

Rotating gating systems in the continuous casting of pipe.
Lit. proizv. no.1:13-16 Ja '63. (MIRA 16:3)
(Continuous casting--Equipment and supplies)
(Pipe, Cast iron)

DAVYDOV, V.D.

Using phosphorus tribromide in the synthesis of pyrimidine bases.
Izv.AN SSSR.Otd.khim.nauk no.3:571-572 Mr '63. (MIRA 16:4)
(Pyrimidine) (Phosphorus bromide)

DAVYDOV, V.D.

AUTHORS: Filippov, B.I., Engineer, Davydov, V.D. 67-58-2-5/26

TITLE: The Automation of Oxygen Turbocompressors (Avtomatizatsiya kislorodnykh turbokompressorov)

PERIODICAL: Kislorod, 1958, // Nr 2, pp. 19-26 (USSR)

ABSTRACT: It is said in the introduction that work with oxygen turbocompressors (especially for starting) can be carried out only by highly qualified specialists, and that it is therefore of great importance that the automation of such plants be completed in such a manner that starting, operating and stoppingare simplified as much as possible and fitted out with safety devices. In the section: The System of Automatic Starting of Turbocompressors various manipulations are first described which must be taken into account when adjusting a non-automatized plant before starting; also other manipulations which are necessary for adjusting the apparatus for normal operation after starting are described. "VNIIKIMASh" (All-Union Scientific Research Institute for the Construction of Oxygen Machines) designed a scheme for the automatic control of the apparatus, with the aid of which such functions as starting and stopping are fully automatized and can be brought about by simply pressing

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a button. A scheme for such an automatic starting- and stopping device is described together with a scheme of the automatic control of this apparatus in the section: The System of Automatic Control. In a further section: The System of Automatic Stopping of the Apparatus 2 photographs of the control platform of such an automatized apparatus are shown and the various functions are described, which are automatically set in motion by pressing the "stop button". In the section : The System of Safety Measures in a Turbocompressor the following signaling devices are described: Oil pressure signaling system " SPDS ", control of water consumption "RR", control of the temperature of bearings by the signaling station of the 12-point electron bridge; control of temperature of oxygen and of the cooled oil by the same electron bridge; control of the temperature of the electron bridge "MSR-018", and a number of external safety measures, among them the disturbance indicator relay "8RK", which, in the case of a breakdown, automatically stops the operation of the apparatus. In the section: "The Automation of Turbomachines in Industry it is said that such a fully automatized plant with turbocompressors of the type "KTK-12.5" has been in operation at the Shchekino gas works since 1957. Such a fully automatic turbocompressor, type KTK-7" is on show at the Brussels World Exhibition. In VNIIKIMASh the same compressors of the type

The Automation of Oxygen Turbocompressors 67-58-2-5/26

"KTK-7" are at present adapted for operation under tropical conditions. They are destined for the metallurgical kombinat of Bhilay in India. There are 5 figures.

AVAILABLE: Library of Congress

1. Turbocompressors—Starting 2. Turbocompressors—Automatic control 3. Turbocompressors—Safety measures

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DAVYDOV, V.D.

AUTHORS: Dolgin, M.Ye., Engineer, Davydov, V.D., Nikitkin, V.D., Engineer 67-58-2-8/26

TITLE: The Automatic Photo-Electron Indicator DDN -1 for the Determination of the Moisture Content in Gases (Avtomaticheskiy fotoelektronnyy indikator vlazhnosti gazov DDN -1)

PERIODICAL: Kislorod, 1958, // Nr 2, pp. 39-43 (USSR)

ABSTRACT: The above moisture indicator is based upon the principle of the condensation method. In the section: Determination and the Main Characteristics of the Apparatus the measuring or control of the moisture content of gases within the temperature range of from +40 to -80° at an atmospheric pressure of 0.01-165 atm excess pressure is given for purposes of determination. In the section: Pneumatic Cooling System this system is described on the basis of a scheme. Furthermore, the description of the cooler for indicator mirrors is given in form of a scheme. In the section: The Photo-Optical Indicator a device is described by means of which signals are transmitted to the amplifier of the apparatus by the condensation on the mirror. The scheme mentioned is described. In the section: Electrical Scheme of the Apparatus the description is based on a

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The Automatic Photo-Electron Indicator DDN -1 for the Determination of the Moisture Content in Gases 67-58-2-8/26

detailed wiring diagram. In conclusion it is argued that the apparatus described has two separate functions: "control" or "measuring" and is therefore regularly used for control during operation or for the determination of the point of condensation of a gas. The apparatus is already being produced in series by the "Kiyevpribor" works of the Kiyev Sovnarkhozes. It can be used for: 1.) Controlling the moisture content of gases under pressure which are used for driving automatic systems with pneumatic connection. 2.) Controlling the moisture content in the production of liquefied gases, ammonia synthesis, etc. 3.) For the control of gaseous oxygen under pressure, such as is used for respiration when flying in great heights, and 4.) In connection with scientific research work carried out in laboratories. There are 6 figures.

AVAILABLE: Library of Congress

1. Gases—Moisture content—Measurement 2. Gases—Temperature factors 3. Equipment—Characteristics

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69863
SOV/35-59-9-7234

3.1550

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 58 (USSR)

AUTHOR: Davydov, V.D.

TITLE: On the Question of Underground Water on Mars

PERIODICAL: Astron. tsirkulyar, 1958, July 3, Nr 193, pp 21 - 22

ABSTRACT: The external manifestations of water on Mars are examined under the assumption that its mean quantity per 1 km^2 of the surface is equal, like on Earth, to $\sim$ 2.7 km^3, while the thermal flux, coming from within the planet is near to the geothermic one, i.e. $1.3 \cdot 10^{-6}$ $cal/cm^2 sec$. The water in liquid form, is apparently found on Mars under a thick layer of eternal ice. The loss of moisture by the planet's atmosphere is compensated by the sublimation of underground ice and by the evaporation of the water under the ice in the places where the ice emerges to the surface. A vertical distribution of temperature was found in the water under the ice. It was found that the latitudinal change in the thickness of the ice gave rise to a horizontal temperature gradient in the water. The glacial cover of Mars is a peculiar hydraulic press. As a result of comparatively small stresses (tectonic phenomena, fall of meteorites) cracks are formed in the ice. It

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On the Question of Underground Water on Mars SOV/35-59-9-7234

is possible that the canals and the dark regions on Mars are connected with similar cracks and water holes in the ice. If this is so, then it is easy to explain the geometric peculiarities of the canals and the tendency of the dark regions to be situated along the lines of the circulation flow of the trade winds.

G.A. Manova

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85543

S/026/60/000/009/008/010
A166/A029

3.1550 (1057, 1062, 1129)

AUTHOR: Davydov, V.D. (Moscow)

TITLE: Is There Water on Mars? \2

PERIODICAL: Priroda, 1960, No. 9, pp. 73 - 77

TEXT: Professor A.I. Lebedinskiy has shown that the transparency of the Martian atmosphere would inevitably lead to any water in it freezing out. The absence of detectable water in the atmosphere is not proof of the absence of water on or below the Martian surface. By analogy with the Earth, the Martian hydrosphere would be formed by secretion of water to the surface under pressure and heat from the depths of the planet. Conditions on Mars were more favorable than on Earth for the melting of matter in the depths of the planet (and therefore for the liberation of crystalline water) and for gravitational differentiation. The layers of the Martian crust weigh less than on Earth due to lower gravity and would therefore be less of a barrier to the movement of water to the surface. The secretion of water to the surface is probably at a later stage on Mars than on Earth. According to O.Yu. Shmidt's cosmogonic theory, since Mars was nearer to the protoplanetary cloud than Earth, the relative content of light

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Is There Water on Mars?

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compounds (including water) in its composition must be greater. The quantity of water on Mars must originally have been comparable with, or even greater than, that on Earth. Assuming the heat stream inside Mars (areothermic stream) to be equal to that on Earth (geothermic), and knowing the maximum and minimum temperatures at the surface, the maximum depth of solid surface water layer must be about 500 m at the tropics and 2 km at the poles. Below this layer the water is in a liquid state. Mars may therefore be covered with "oceans" of glacial conglomerate, i.e., ice mixed with eolian deposits of matter from the mountain peaks which remain above the water level. By analogy with Earth and the difference between peaks and ocean depths, the oceans may be as deep as 15 - 20 km. This hypothesis would explain the suprisingly even relief on Mars. Night precipitation is observed as a "morning arc" on Mars. There must be some source whereby the atmosphere is kept replenished with water, otherwise it would long ago have been dehydrated and there could be no atmospheric precipitation. The source of replenishment may be volcanic processes or else tectonic or meteorite fissures in the glacial conglomerate. Water or water vapor would gush out along the line of the fissure and condense upon meeting with the colder air to form a white zone along the fissure. Such white zones have in fact been observed by N.P. Barabashev as bright, short-lived bands stretching for thousands of kilometers, sometimes exact-

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Is There Water on Mars?

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ly along the line of a "canal" and sometimes between two adjoining canals. The cracks would become covered over with ice, but ice ten times thinner than the surrounding ice mass and with temperatures ten times higher than at the same level in the mass. Such cracks might persist as flaws in the cryosphere for millions of years. From his calculations of the temperature distribution in the Martian hydrosphere, the author deduces the presence of equatorial-polar circulation of water, deviating from the meridional like the trade winds on Earth. The effect of these currents on the strength of the ice mass would lead to cracks, primarily aligned south-west in the southern hemisphere. Such an alignment has been observed by MacLaughlin. The cracks would favor vegetation, especially in the southern latitudes where the sun is hotter. This may be the explanation of the Martian "canals". Since the cracks open up only episodically, the polar caps must play a decisive role in the regular supply of water to the Martian atmosphere. Optical measurements indicate that the polar caps are only millimeters or fractions of a millimeter thick. Clearly this is not in keeping with the theory of the "life-giving thawing" of the caps. The author's explanation for this phenomenon is as follows: In the lower and moderate latitudes the night precipitation in the form of ice conglomerate melts during the day and the water is evaporated. In the

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Is There Water on Mars?

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polar areas the crystals of ice are preserved at the surface, so that the Martian polar caps are in fact surface outcrops of the glacial conglomerate. During the long polar day the sun's rays melt the surface layers (summer retreat of the polar cap) and liberate great masses of water which could cause the darkening at the edge of the polar cap (the "life-giving wave"). There are 2 figures.

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89068
S/555/60/007/000/006/007
B123/B201

3.1550(1057, 1062, 1129)

AUTHOR: Davydov, V. D.

TITLE: Behavior of the hydrosphere under Martian conditions and its observable phenomenological forms

PERIODICAL: Voprosy kosmogonii, v. 7, 1960, 142-166

TEXT: The author has delivered lectures both at a conference convened by the kafedra astrofiziki MGU (Division of Astrophysics, Moscow State University) on May 20, 1957, and at the conference of the kafedra okeanologii MGU (Division of Oceanography, Moscow State University) in 1958. Here, he discusses the possibility of inferring other conditions from the hydrogen content of the Martian atmosphere.. A. I. Lebedinskiy does not exclude the possibility of there being rock-covered frozen seas on Mars. The first section of the present paper is devoted to problems of the existence of ground water and the conservation of humidity of the Martian atmosphere. V. G. Fesenkov offers four possible sources that may account for the generation of thermal energy on planetary bodies. The author believes that the thick icecap which is covered by dust (as a result of rock decay and decay products in the

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Behavior of the hydrosphere ...

lower layers of the atmosphere), has water underneath if the water reservoirs on Earth and Mars are comparable. The thickness of the icecap is thought to be 0.5 at the equator and 2 km at the poles. O. Yu. Shmidt is mentioned in this connection. Research conducted by oceanographists has made a valuable contribution to astronomy. The icecap is defined as an icy conglomerate, and the durability of cracks in the icy conglomerate of Mars is discussed along with the temperature near the cracks. The inevitable underground accumulation of atmospheric water could be compensated by cracks in the icecap. N. P. Barabashov has published a study on the "canals" of Mars. Studies by N. N. Zubov are also mentioned. Section 5 offers an explanation of the nature and geometry of the "canals" and of the dark zones on Mars. B. Yu. Levin, Doctor of Physical and Mathematical Sciences, and V. S. Safronov, Candidate of Physical and Mathematical Sciences of the Institut fiziki Zemli AN SSSR (Institute of Physics of the Earth AS USSR) are thanked for their interest in the work. There are 3 figures, 1 table, and 12 references: 11 Soviet-bloc and 1 non-Soviet-bloc.

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21732
S/026/61/000/003/001/006
A166/A127

3,2100 (2305, 2605, 2705, 1057)

AUTHOR: Davydov, V. D.

TITLE: The Earth-Venus Trip

PERIODICAL: Priroda, no. 3, 1961, 3-4

TEXT: On February 12, the USSR launched an automatic interplanetary station into trajectory. The aim of the station is to test the equipment provided for placing the station in its proper trajectory, to check the control system, experiment with super-long distance radio communication, derive more precise data on the scale of the solar system and to record the physical conditions on the station's path. The station is provided with equipment for recording cosmic radiation and micrometeorites and for studying interplanetary matter and magnetic fields. Leaving the earth's gravitational pull the station went into its own orbit around the Sun. The orbit had the form of an ellipse, with the sun at one focus. The ellipse would cross the orbit of Venus at an angle of only a few degrees

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S/026/61/000/003/001/006
A166/A127

The Earth-Venus Trip

which means that the two bodies would continue along neighboring paths for a distance of some 30,000,000-40,000,000 km. A few days after launching the station's speed had decreased to 4 km/sec relative to the earth is orbit around the Sun. Its true speed, however, is just under 30 km/sec, i. e. almost equal to the earth's speed. For a week before and after its nearest approximation to Venus the station was scheduled to move at a roughly similar speed and at a comparatively close distance from the planet. The station should furnish valuable data on the physical conditions on Venus. Calculation based on the infrared radiation of Venus indicate that the temperature at the irradiating surface (in this case the cloud level) is in the region of -33° to -38°. The latest measurements of radio-frequency emission on the 3 and 10 cm bands indicate that the surface temperature is about 300°C. Observations on the 8 mm wave give a somewhat lower reading, probably because the lower waves are partially absorbed in the Venetian atmosphere. At a surface temperature of 300°C an ocean could only exist at a high pres-

The Earth-Venus Trip

S/026/61/000/003/001/006
A166/A127

sure of over 87 atmospheres, whereas the Venetian atmosphere at cloud level is not very dense. The necessary atmospheric pressure could only exit if the clouds are situated several dozen kilometers above the surface. The twilight zone separating the illuminated hemisphere of Venus from the night side is much broader than that of earth's. Professor V. V. Sharonov thinks that this is due to the great height of the clouds on Venus and their light-scattering effect. The station is equipped with magnetometers to measure for any possible magnetic field around Venus. If such a field is present there may also exist bands of high-energy particles such as encompass the earth.

ASSOCIATION: Gosudarstvennyy Astronomicheskiy institut im. P.K. Shternberga (State Astronomical Institute imeni P.K. Shternberg), Moscow.

Card 3/3

DAVYDOV, V.D.

From the "window" of a space station. Nauka i zhizn' 28 no.9: 34-36 S '61. (MIRA 14:12)

1. Uchenyy sekretar' Gosudarstvennogo astronomicheskogo instituta imeni P.K. Shternberga.
(Space flight to Venus)

S/025/62/000/006/004/005
D222/D307

AUTHOR: Davydov, V.D.

TITLE: On the moon

PERIODICAL: Nauka i zhizn', 1962, no. 6, 42 - 47

TEXT: The author describes the lunar environment emphasizing the more unusual features such as the lack of atmosphere, extremes of day and night temperatures, light distribution, the nature and probable origin of the moondust, low gravitational force, the appearance of the earth and sun, the impact of meteors etc. In the final section the kind of scientific observatory that could be established on the moon is outlined. The observation station would be under the surface of the moon, where the temperature is nearly constant and there is no danger from meteors; it would have a very large radio and optical telescope, a TV repeater station for long-distance telecommunication, a greenhouse, solar power stations, etc. The station could also be used for the assembly of long-range spaceships. There are 4 figures.

Card 1/2

S/025/62/000/006/004/005
D222/D307

On the moon

ASSOCIATION: Gosudarstvennyy astronomicheskiy institut imeni P.K. Shternberga (State Astronomical Institute imeni P.K. Shternberg)

Card 2/2

BOGATIKOV, O.A.; GROSHEV, N.A., kand.sel'skokhoz.nauk (Moskva); DAVYDOV, V.D.; UDINTSEV, G.B.

News, events, and facts. Priroda 51 no.4:106-112, 114-116 Ap '62. (MIRA 15:4)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva (for Bogatikov). 2. Gosudarstvennyy astronomicheskiy institut im. P.K.Shernberga, Moskva (for Davydov). 3. Institut okeanologii AN SSSR, Moskva (for Udintsev).

(Science news)

SOLOMATIN, A.O. (s.Vsevolodo-Blagodatskoye, Sverdlovskaya obl.); GRIGOR'YEV, G.V.; FREYDZON, A.I.; KUZNETSOV, N.T.; POLOV, A. (Barnaul); RZHEVSKIY, B.M. (Moskva); DAVYDOV, V.D.

Calendar of nature. Priroda 51 no.3:125-128 Mr '62.
(MIRA 15:3)

1. Karagandinskiy botanicheskiy sad AN Kazakhskoy SSR (for Grigor'yev). 2. Severo-Zapadnoye upravleniye gidrometsluzhby, Leningrad (for Freydzon). 3. Institut geografii AN SSSR, Moskva (for Kuznetsov). 4. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga, Moskva (for Davydov).
(Nature study)

DAVYDOV, V.D.

On the moon. Nauka i zhizn' 29 no.6:42-47 Je '62. (MIRA 15:10)

1. Uchenyy sekretar' Gosudarstvennogo astronomicheskogo instituta imeni P.K. Shternberga.
(Space flight to the moon)

DAVYDOV, V.D.

Dyson's sphere is impossible. Priroda 52 no.11:100-101 '63. (MIRA 17:1)

1. Gosudarstvennyy astronomicheskiy institut im. P.K. Shternberga, Moskva.

L 24481-65

ACCESSION NR: AT5000855 S/2800/64/000/008/0180/0200

AUTHOR: Davydov, V. D.

TITLE: New series setups of industrial thermometric devices

SOURCE: Vsesoyuznyy nauchno-issledovatel'skiy institut kislorodnogo mashinostroyeniya. Trudy, no. 8, 1964. Apparaty i mashiny kislorodnykh ustanovok (Apparatus and machines of oxygen plants), 180-200

TOPIC TAGS: air fractionation, thermometry, serial thermometer, resistance thermometer

ABSTRACT: Seven types of industrial thermometers were tested in setups satisfying the standards of the Lvov Sovnarkhoz under normal operating conditions for periods of 5 hours. Three platinum resistance thermometers were tested. The TSP-047M, calibrated from -50 to 250C (electrical resistance at 0C equal to 46±0.046 ohm, heat inertia no greater than 40 sec., and pressure shield good for better than 250kg/cm^2), has a PL-2 platinum wire 0.05mm in diameter (GOST 8588-57) double-wound on a mica base. The TSP-037K is identical, except for the platinum wire, which is coiled spirally on a ceramic base, the temperature range of -220 to 120C,

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L 24481

ACCESSION NR: AT5000855

the resistance at 0C of 100±0,5ohm, and the maximum heat inertia of 9 sec. The TSP-017-0, with a temperature range of -220 to 150C, electrical resistance at 0C of 100±0.1 ohm, heat inertia of 10 sec. maximum, and pressure shield good for 15kg/cm^2, has a senseory element 400 mm long, 0.7 mm thick, of platinum PL-2, double -wound on flat duralumin and covered with vinyliflex varnish. The author also describes and presents schematic and block diagrams for an assembly for measuring the electric current profile (the LPr-017M), with adjustable characteristics covering temperatures from -220 to 250C; the KS-017 assembly, combining in itself 12 resistance thermometers; a self-recording and regulating multi-point automatic bridge of the type MSR-018 in two variants, which combines, in principle, the action of many thermometers; and bi-positional semiconducting temperature signalizer of the type ST-020M, capable of measuring temperatures from -220 to 300C. Generalized comments on the results obtained are included. Orig. art. has: 14 figures and 2 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut kislorodnogo mashinostroyeniya (All-union oxygen machine building scientific research institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: TD, IE

NO REF SOV: 004 OTHER: 000

Card 2/2

DAVYDOV, V.D., inzh.; FIL'TSER, S.L., inzh.

Measurement of temperature differences in the regenerators of air separation plants. Trudy VNIIKIMASH no.9:163-169 '65.
(MIRA 18:6)

DEBABOV, V.G.; DAVYDOV, V.D.

Synthesis of poly-L-arginine. Izv. AN SSSR Ser. khim. no.1: 203 '65. (MIRA 18:2)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

L 1673-65 FBD/EWT(1)/FS(v)-3 DD/GW/WS-4

ACCESSION NR: AP5024185 UR/0384/65/000/004/0040/0048

AUTHOR: Davydov, V. D. (Aspirant) 55

TITLE: Physical conditions on Mars

SOURCE: Zemlya i vselennaya, no. 4, 1965, 40-48

TOPIC TAGS: Mars planet, radar astronomy, astrophysics, astronomy, astrobiology

12, 55 12, 55

ABSTRACT: Radar investigations of Mars made at 700 mc during the opposition of 1963 indicate that the "continents" of that planet are essentially extensive flat plains. Though the upper layers of the Martian atmosphere are denser and offer greater resistance to intruding high-velocity meteorites or space vehicles than do those of the earth, nonetheless, the degree of burn-up of lower velocity bodies would be less than in the case of the earth because of the weaker acceleration of gravity on Mars. Spectral investigations of the Martian atmosphere indicate the presence of carbon dioxide. It is believed, however, that the major component of the Martian atmosphere is nitrogen. A negligible amount of water vapor can also be expected.

Card 1/3

37 B

Deimos and Photos, the natural satellites of Mars, are characterized by their small size and low orbits. Much has yet to be determined about their nature. V. V. Sharonov has advanced the theory that the seasonal changes observed on the Martian surface result from the fact that the Martian "seas" are actually erosion rather than aggradation zones. Seasonal winds, he believes, remove the limonite-like surface dust layer, thus exposing the darker bedrock. V. G. Fesenkov has suggested that terrestrial-like minerals may be found in the dark regions of Mars. The author, Davydov, believes, however, that the dark sectors reflect the spread of some primitive plant life. Davydov insists that there is as yet no conclusive evidence that would absolutely preclude the possibility of life on Mars. As for the Martian "canals," N. P. Barabashov attributes them to long light bands that arise suddenly, remain but a few minutes, and then disappear. Barabashov has noted that occasionally white bands persist for a longer period of time and seem to run parallel to the "canals." The author accounts for the "canals" by assuming the presence of liquid oceans whose surface is almost always ice-covered. The "canals," Davydov states, are merely cracks in the ice mantle caused either by "marsquakes" or by the impact of a large meteorite. Vegetation is

L 1673-66
ACCESSION NR: AP5024185

then thought to grow up along the linear ice crack. Much more information could be gathered about the nature of Mars, Davydov concludes, if its spectrum could be studied in the far ultraviolet. Orig. art. has 22 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: AA

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4089-F

Card 3/3 DP

DAVYDOV, V.D., aspirant

Mars is our cosmic neighbor. Zem. i vsel. 1 no.4:
40-48 Jl-Ag '65. (MIRA 18:12)

TALYSHINSKIY, R.I., kand.tekhn.nauk; DAVYDOV, V.F., inzh.

Tensometric method of deriving the mechanical characteristics of asynchronous motors with short-circuited rotors. Vest. elektroprom. 32 no.1:52-55 Ja '61. (MIRA 14:3)
(Electric motors, Induction)

TALYSHINSKIY, R.I., kand. tekhn. nauk; DAVYDOV, V.F., inzh.

Additional losses in an asynchronous chort-circuited motor with noninsulated rotor pins. Elektrotekhnika 35 no.5:16-18 My'64 (MIRA 17:8)

DAVYDOV, V.F.

Part catcher. Mashinostroitel' no. 1:20 Ja '66 (MIRA 19:1)

DAVYDOV, V. F, Cand Med Sci -- (diss) "Effect of adoniside upon the content of glycogen and in the heart and liver, and sugar in the blood of healthy and animals with dystrophy of the myocardium." Kuybyshev, 1959. 12 pp (Kuybyshev Med Inst. Chair of Pharmacology), 230 copies (KL, 49-59, 142)

DAVYDOV, V.F.

Multiseat attachment for continuous milling of grooves and flats. (MIRA 12:1)
Stan. i instr. 29 no.3:37 Mr '58.
(Milling machines--Attachments)

DAVYDOV, V.F.

Rapid boring of deep holes. Stan.i instr. 29 no.11:37 N' 58.
(Drilling and boring) (MIRA 11:11)

DAVYDOV, V.F.

Holders used in machining annular grooves. Stan.i instr. 29 no.12: 37 D '58. (MIRA 11:12)

(Lathes--Attachments)

DAVYDOV, V.F.

PHASE I BOOK EXPLOITATION SOV/4618

Geofiznefteuglerazvedka, trest. Upravleniye geofizicheskikh rabot

Geofizicheskaya razvedka, vyp. 2 (Geophysical Survey No. 2) Moscow, Gostoptekhizdat, 1960. 126 p. (Series: Obmen proizvodstvennym opytom) 3,000 copies printed.

Sponsoring Agencies: Glavnoye upravleniye geologii i okhrany nedr pri Sovete Ministrov RSFSR; Upravleniye geofizicheskikh rabot trest Geofiznefteuglerazvedka.

Ed.: O.K. Glotov; Executive Ed.: S.M. Yungans; Tech. Ed.: L.V. Ganina.

PURPOSE: This book is intended for engineers and technicians working in geology and geophysics.

COVERAGE: This is a collection of 11 articles on geophysical methods and techniques of surveying mineral deposits. The authors discuss problems in processing and interpreting the results of surface and underground gravimetric surveys and seismic logging. New types of geophysical instruments and equipment, the AFI-2 and AFI-U amplitude-phase meters, the small portable CP-55 ultrasonic seismoscope, two-dimensional perforated sheet material for modeling seismic waves, a pantograph, and a modified ISh-4 inclinometer are described in detail. No personalities are mentioned. References accompany individual articles.

AVAILABLE: Library of Congress

JA/dwm/gmp
12-19-60

Card 3/3

DAVYDOV, V.F.

Aerotopographic method for controlling flight line in aerogeophysical surveying. Razved. i okh. nedr 26 no. 1:51-53 Ja '60.
(MIRA 13:12)

1. Irkutskaya aerogeogizicheskaya ekspeditsiya.
(Aeronautics in surveying)

D'YACHKOV, N.P.; DAVYDOV, V.F.; VERSHININ, V.I.

Using a pantograph for transforming ΔT curves. Geofiz. razved. no.2:120-124 '60. (MIRA 13:12)

(Pantograph)

DAVYDOV, V.F.

Influence of adonisido on the carbohydrate metabolism in healthy white mice and in animals with experimental myocardial dystrophy. Farm. i toks. 24 no.4:463-467 Jl-Ag '61. (MIRA 14:9)

1. Kafedra farmakologii (zav. - prof. P.F.Teterin [deceased]) Kuybyshevskogo meditsinskogo instituta.
(CARDIAC GLYCOSIDES) (CARBOHYDRATE METABOLISM)
(HEART—DISEASES)

DAVYDOV, V.F., aspirant

Effect of lethal doses of adoniside on some direction of carbohydrate metabolism; reprot No. 1. Trudy Kuib.med.inst. 11:282-286 '60. (MIRA 15:8)

1. Iz kafedry farmakologii (zav. kafedroy prof. P.F.Teterin [deceased]) Kuybyshevskogo meditsinskogo instituta.
(ADONISIDE) (CARBOHYDRATE METABOLISM)

DAVYDOV, V.F., aspirant

Effect of toxic doses of adonoside on some directions of carbohydrate metabolism; report No.2. Trudy Kuiv.med.inst. 11:286-290 '60.
(MIRA 15:8)

(ADONOSIDE) (CARBOHYDRATE METABOLISM)

DAVYDOV, V.F., aspirant

Effect of adonoside on carbohydrate metabolism in white mice with myocardial dystrophy; report No. 5. Trudy Kuib.med.inst. 11:298-301 '60. (MIRA 15:8)

(ADONOSIDE) (CARBOHYDRATE METABOLISM) (HEART--DISEASES)

DAVYDOV, V.F.

Searching for iron ores in the Angara-Ilim area and adjacent areas of Irkutsk Province. Geofiz. issl. i probl. neftegaz. iuga Sib. plat. no.2:228-236 '62. (MIRA 15:8)
(Irkutsk Province--Iron ores) (Prospecting--Geophysical methods)

DAVYDOV, V.F., aspirant

Effect of small doses of adonoside on some directions of carbohydrate metabolism; report No. 3. Trudy Kuib.med.inst. 11:291-294 '60.
(MIRA 15:8)

(ADONOSIDE) (CARBOHYDRATE METABOLISM)

DAVYDOV, V.F., aspirant

State of carbohydrate metabolism in white mice in phosphorus poisoning; report No.4. Trudy Kuib.med.inst. 11:295-297 '60. (MIRA 15:8)

(CARBOHYDRATE METABOLISM) (PHOSPHORUS--TOXICOLOGY)

DAVYDOV, N.F.

Device for automatically recording local relief from an airplane during airborne geophysical surveys. Razved.i okh. nedr 29 no.1:52-55 Ja '63. (MIRA 16:2)

1. Trest "Vostsibneftegeofizika".
(Physical geography) (Aeronautics in surveying—Electronic equipment)
(Automatic control)

DAVYDOV, V.F.

Pharmacological effects of dichloroethylamine derivatives on the salivary glands depending on the chemical structure of the derivatives. Farm. i toks. 27 no.4:487-490 Jl-Ag '64.
(MIRA 17:11)

1. Kafedra farmakologii (zav. - kand. med. nauk V.F. Davydov) Arkhangel'skogo meditsinskogo instituta.

DAVYDOV, V.F.

Pulsating assembly conveyor. Mashinostroitel' no.5:3-4 My '65.
(MIRA 18:5)

L 3001-66 EWT(1)

ACCESSION NR: AP5020031 UR/0292/65/000/008/0007/0010
621.313.322.001.2

28
8

AUTHOR: Talyshinskiy, R. I. (Candidate of technical sciences); Davydov, V. F. (Engineer)

TITLE: Selecting the value of contact resistance between the rotor rods and the steel core in a squirrel-cage induction motor 29

SOURCE: Elektrotekhnika, no. 8, 1965, 7-10

TOPIC TAGS: induction motor

ABSTRACT: The load-caused loss in size-7, 13--40-kw squirrel-cage 3-phase induction motors determined experimentally (89 motors tested) varied within 1--5.2%, with an average of 2.0% of the supplied power. Pressure-cast aluminum was used in all rotors. This loss causes still higher (percentagewise) reduction in the motor efficiency. An equation developed by the authors in one of their previous articles is analyzed; it establishes the relation between the load-caused loss, the contact resistance, and the slot skewing for any harmonic. A new formula is developed for calculating the maximum possible loss due to rotor cross currents caused by a harmonic; the formula permits evaluating individual contributions

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L 3001-66
ACCESSION NR: AP5020031

of harmonics to the load-caused loss. The assumption that the contact resistance is concentrated at the middle of the rotor core permits determining analytically, with an adequate accuracy, the desirable level of the rotor contact resistance. The calculation of optimal contact resistance is reduced to determining (by means of a formula supplied) its value for that harmonic which causes the greatest influence on the rotor-cross-current additional loss. Orig. art. has: 2 figures, 14 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE

NO REF SOV: 004 OTHER: 001

Card 2/2 Md

DAVYDOV, V.F.

Pulse-action sectional conveyor. Biul.tekh.-ekon.inform. Gos.nauch.-issl.inst.nauch.i tekh.inform. no.8:44-46 Ag '65. (MIRA 18:12)

ACC NR: AP6035602 SOURCE CODE: UR/0387/66/000/010/0091/0096

AUTHORS: Davydov, V. F.; Kravchinskiy, A. Ya.

ORG: Eastern Geophysical Trust (Vostochnyy Geofizicheskiy trest)

TITLE: Changes in magnetization of clastic sediments during the first stages of lithogenesis

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 10, 1966, 91-96

TOPIC TAGS: magnetization, earth magnetism, magnetic property, quartz

ABSTRACT: Many data indicate that the magnetization of sedimentary rocks changes appreciably in the early stages of their history. The authors have prepared some mixes of quartz and magnetite of various sizes (0.008 to 0.36 mm for magnetite, 0.008 to 0.81 mm for quartz) to study such changes. The material was allowed to settle in quiet water in the earth's field. Settling distances ranged from 0.1 to 1 m, and shaking of the mix ranged in duration from 0 to 40 seconds. Inclination of magnetization in the sediments was found to change with time of shaking and with size of particle. The authors conclude that external mechanical factors bring about changes in the mutual arrangement of grains in fresh clastic sediments. As a result of these changes, the direction of magnetization in the rocks approaches that of the earth's field by the time diagenesis begins. Since the magnetization of fresh sediments may be altered, a real concept of distortions in directions of magnetization in clastic

Card 1/2 UDC: 550.382.3

ACC NR: AP6035602

rocks cannot be obtained by studying only the processes of sedimentation or the reworking of clastic material. The picture can be obtained only by investigating the nature of magnetization in rocks of a given stratigraphic horizon under various conditions of magnetization. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 08/ SUBM DATE: 08Aug65/ ORIG REF: 014/ OTH REF: 005

Card 2/2

DAVYDOV, V. G.

27277
"O Vetnadzore za preduzheniem zhivotnykh." Veterinariya
O Vyetnadzurye Za Pyertedvizhyeniyem Zhivotnykh Vyetyerinariya, 1949, No 9, S. 48-50

SO: LETOPIS NO. ~~34~~ 36

DAVYDOV, V.G.

OGRYZKOV, Ye.P., inzhener; DAVYDOV, V.G., inzhener.

Results of testing P-5-35TS universal plows. Sel'khozmashina no.12:17-21 D '56. (MLRA 10:2)

1. Sibirskaya mashinoispytatel'naya stantsiya.
(Plows)

S/028/60/000/010/018/020
B013/B063

AUTHOR: Davydov, V. G.

TITLE: Analytical Methods for Ferrous Metals

PERIODICAL: Standartizatsiya, 1960, No. 10, p. 59

TEXT: This is a report on new standard specifications for the analysis of ferrous metals and alloys. ГОСТ 1219-60 (GOST 1219-60) for "Calcium Babbits. Methods of Chemical Analysis" was enforced on January 1, 1961. The methods of complexometric analysis laid down in this standard have found wide application in railroad engineering. A standard for the spectrum analysis of calcium babbits was approved at the same time. GOST 7727-60 "Aluminum Alloys. Methods of Spectral Analysis" has been valid since July 1, 1960. At present, standards for the spectrum analysis of copper and brass of the type Л62 (L 62), and for rare and high-purity metals used in semiconductor engineering are being worked out. Standards for the analysis of tin and tellurium with a purity of 99.999% and 99.996%, respectively, are intended to be elaborated in 1960-1961.

Card 1/1

DAVYDOV, V. G.

Methods for the analysis of nonferrous metals. Standartizatsiia 24 no.10:59 '60. (MIRA 13:10)

(Nonferrous metals--Testing)

S/028/61/000/004/005/007
B103/B206

AUTHOR: Davydov, V. G.

TITLE: Standards for products of nonferrous metallurgy

PERIODICAL: Standartizatsiya, no. 4, 1961, 37-38

TEXT: The author discusses newly introduced standards: (1) ГОСТ 9721-61 (GOST 9721-61) for cobalt powder, (2) GOST 9722-61 for nickel powder, (3) GOST 9723-61 for tin powder, (4) GOST 9724-61 for silver powder, which are valid from July 1, 1961; further: (5) GOST 9559-60 for lead sheets, and (6) GOST 598-60 for zinc sheets for general purposes, valid from April 1, 1961. Ad (1): The newly laid-down chemical composition restricts more tightly the content of admixtures than was the case under technical conditions valid so far. Two types of powders are provided: ПК-1(PK-1) with a minimum of 99.2% Co, and ПК-2(PK-2) with a minimum of 98.2% Co. Included in the standard was the determination of oxygen elaborated by the Institut "Gipronikel'" (State Design and Planning Scientific Research Institute of the Nickel, Cobalt, and Tin Industry), which so far was not provided in standards for chemical and spectrum analyses. Ad (2): Three types of nickel powder are provided:

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B103/B206

Standards for ...

(a) produced according to the carbonyl method: ПНК-1 (PNK-1) and ПНК-2 (PNK-2), as well as (b) produced according to the electrolytic method: ПНЭ (PNE) with at least 99.1% Ni. Ad (1) and (2): For cobalt and nickel powders, the granular composition is laid down, as well as the methods for taking analysis samples. The method of determination of oxygen for nickel powder PNE is similar to that for cobalt powder, and is based on reduction of a weighed amount of powder in a hydrogen flow. Ad (3) and (4): The Komitet standartov, mer i izmeritel'nykh priborov (Committee on Standards, Measures, and Measuring Instruments) elaborated standards for tin and silver powder on the basis of valid technical specifications. The chemical and granular composition and methods for taking samples were laid down. In tin powder, the content of Sn must not fall short of 99.5%, and in silver powder the content of Ag not short of 99.9%. Both are used in powder metallurgy, silver powder mainly for contacts and products. The production of these contacts which has greatly increased during recent years permits a reduction of silver consumption by introducing other components into the mixture, which also gives longer service life for the contacts. The standard provides for two types of silver powder: ПС-1 (PS-1) and ПС-2 (PS-2) which only differ in granular composition. In all above-mentioned standards for metal

Card 2/3

Standards for ...

powders, uniform methods of determining the bulk weight by using Scott's volumeter are laid down. Ad (5): An increase of the assortment from 0.2 to 15 mm thickness (instead of 0.3-5 mm according to OCT ЦМ 414-39 (OST TsM 414-39)) is provided here. The length of sheets was also increased to 1200 mm (instead of 1050 mm). Two widths are provided: 500 and 600 mm. This greater area permits economic consumption, and increases production. Finally, a special protective packing is laid down. Ad (6): Production is simplified by unification of sheet assortments. The consumer receives sheets which can be cut more easily. Moreover, marking, packing, and transport instructions for zinc are accurately laid down.

✓

Card 3/3

DAVYDOV, V.G.

Improving the condition of switches. Put' i put. khoz. 7 no.8:31-32 '63. (MIRA 16:9)

1. Nachal'nik Novosibirskoy distantsii Zapadno-Sibirskoy dorogi.
(Railroads--Switches)

ISAKOV, Vasiliy Ivanovich; DAVYDOV, Viktor Ivanovich; ILYUSHIN, A.P., red.; VOLKOVA, V.G., tekhn. red.

[Accounting machines and accounting in commerce] Schetnye mashiny i uchet v torgovle. Moskva, Gosstorgizdat, 1963. 334 p. (MIRA 16:5)
(Calculating machines) (Commerce)

CHUKHIN, B.A.; DAVYDOV, V.I.

Advantage of "B" collar threaded joints. Razved. i okh. nedr 27 no.6:42 Je '61. (MIRA 14:9)

1. Vorkutinskaya kompleksnaya geologorazvedochnaya ekspeditsiya (for Chukhin).

(Boring machinery)

DAVYDOV, V.I.; PUZYREVSKIY, Yu.K.

Programmed control of air-steam stamp hammers by the energy of the stroke. Kuz.-shtam.proizv. 4 no.10:32-36 O '62. (MIRA 15:12)

(Forging machinery) (Pneumatic control)

DAVYDOV, V. I.[deceased]

"Sever-1" semiautomatic rod installer. Razved. i okh. nedr 28 no.5:54-56 My '62. (MIRA 15:10)

1. Vorkutinskaya kompleksnaya geologorazvedochnaya partiya.

(Boring machinery—Equipment and supplies)

SOV/118-59-3-13/22

28(1),25(5)

AUTHOR: Totoonov, A.T., Tsepenyuk, B.I., and Davydov, V.I., Engineers

TITLE: A Hydraulic Method of Mine Working and Transportation of China Clay Ore (Gidravlicheskiy sposob razrabotki i transporta kaolinovoy rudy)

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1959, Nr 3, pp 38-40 (USSR)

ABSTRACT: In mining china clay ore it has become necessary to search for new methods, because of difficult working conditions in the spring and fall, and the increasing demand for it in the national economy. In order to meet the requirements of the Glukhovetskiy combine, Vinnitsa sovnarkhoz, 100 million rubles are to be invested for its reorganization. Long examination of hydromechanical working methods and transportation of china clay ore in the combine have led to following conclusions: Using small and simple equipment operated by 4-5 persons, the hydro-processing plant can constantly be pro-

DAVYDOV, V.I., kandidat tekhnicheskikh nauk.

Forces acting during the bending of thin-walled profiles by winding. Avt. trakt.prom. no.8:27-30 Ag '53. (MLRA 6:8)

1. Gor'kovskiy politekhnicheskiy institut. (Metals--Cold working)

DAVYDOV, Vladimir Ivanovich; MAKSAKOV, Mikhail Petrovich; SHOR, E.R., redaktor; STARODUBTSEVA, S.N., redaktor; EVENSON, I.M., tekhnicheskiy redaktor

[Production of bent profiles by shaping on a roll bending machine] Proizvodstvo gnutykh profilei metodom profilirofaniia na rolikovykh stankakh. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1954. 140 p. (MLRA 7:10)
(Metalworking machinery)

DAVYDOV, V.I., kandidat tekhnicheskikh nauk.

Method of designing stamping devices for bending ellipsograph machines. Avt.trakt.prom. no.12:16-19 D '54. (MLRA 8:2)

1. Gor'kovskiy politekhnicheskiy institut im.Zhdanova.
(Metal-working machinery)

DAVYDOV, V. I.

USSR/Engineering - Machine tool design

Card : 1/1 Pub. 128 - 10/32

Authors : Davydov, V. I.

Title : A method for designing portable bending-machines with gear-copying mechanisms.

Periodical : Vest. mash. 34/7, 35 - 40, July 1954

Abstract : Methods for designing portable bending-machines with gear-copying mechanisms, are discussed. Operational characteristics, structure, and performance of a bending machine, are described, and diagrams are presented depicting machine components and bending operations. Three references.

Institution : ...

Submitted : ...

SOV/124-57-4-4734

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 123 (USSR)

AUTHOR: Davydov, V. I.

TITLE: Shearing Stresses Arising During Plastic Flexure (Kasatel'nyye napryazheniya pri plasticheskom izgibe)

PERIODICAL: Tr. Gor'kovsk. politekhn. in-ta, 1956, Vol 11, Nr 3, pp 49-60

ABSTRACT: The author examines the shearing-stress distribution during transverse bending of a beam of rectangular cross section in the case when the tension-compression diagram of the material of the beam is defined by two sloping straight lines, i.e., in the case of linear strain-hardening. The solution given is approximate in the sense that the hypothesis of plane sections is preserved even in the presence of the shearing stresses within the cross sections. The computation of the normal stresses in the same section is based on a case of a uniaxial stressed state, etc., and it is for this reason that the shearing stresses, in the particular instance of a perfectly plastic material, are found only within the boundaries of the elastic zone. The article contains neither a bibliography nor any reference to original sources, and the author is, apparently, not aware of their existence although

Card 1/2