Some Individual Regularities Characterising Coking Conditions in Industrial Ovens

content to 8.0 - 8.5% which decreases the evolution of non-condensing gases in the cold charge and increases the density of the upper layers of the blend during levelling; b) a decrease in the under-roof temperature and slower coking rate; c) a decrease in the content of dust (below
Card 4/4 0.2 mm) in the blend.
There are 8 figures and 1 table.

ASSOCIATION: Giprokoks

STEPANENKO, Mariya Aleksandrovna; BRON, Yakov Abramovich; KULAKOV, Nikolay Konstantinovich; LEYTES, V.A., otv.red.; LIBERMAN, S.S., red.izd-va; ANDREYEV, S.P., tekhn.red.

[Production of pitch coke] Proizvodstvo pekovogo koksa. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 311 p. (MIRA 14:7)
(Coke industry--Equipment and supplies)

KULAKOV, N.K.; ZUBILIN, I.G.

Heat losses to the surrounding medium in coke ovens of the PK-2K and PVR system. Koks i khim. no.4:21-26 '61. (MIRA 14:3)

1. Giprokoks (Kulakov). 2. Khar'kovskiy nauchno-issledovatel'skiy uglekhimicheskiy institut (for Zubinin).
(Coal—Carbonization) (Heat—Transmission)

TAYTS, Ye.M., doktor tekhn. nauk; SHVARTS, S.A., kand. tekhn. nauk[deceased]; PEYSAKHZON, I.B., inzh.; GEL'FER, M.L., inzh.; DMITRIYENKO, M.T., inzh.; DORFMAN, G.A., inzh.; IZRAELIT, Ye.M., inzh.; KULAKOV, N.K., inzh.; KUSHLYANSKIY, B.S., inzh.; MEYKSON, L.V., inzh.[deceased]; LEONOV, A.S., inzh.; SHVARTS, G.A., inzh.; SHVARTSMAN, I.Ya., inzh.; YATSENKO, N.Ya., inzh.; BABIN, P.P., inzh.; KHANIN, I.M., doktor tekhn. nauk, prof., red.; KOZYREV, V.P., inzh., red., KUPERMAN, P.I., inzh., red.; LGALOV, K.I., inzh., red.; LEYTES, V.A., inzh., red.; LERNER, B.Z., inzh.,red.; POTAPOV, A.G., inzh., red.; SHELKOV, A.K., red.

[By-product coke industry worker's handbook in six volumes] Spravochnik koksokhimika v shesti tomakh. Moskva, Metallurgiia. Vol.2. 1965. 288 p. (MIRA 18:8)

KULAKOV, N. M., Vice-Adm (Member of the Military Council of the Black Sea Fleet)

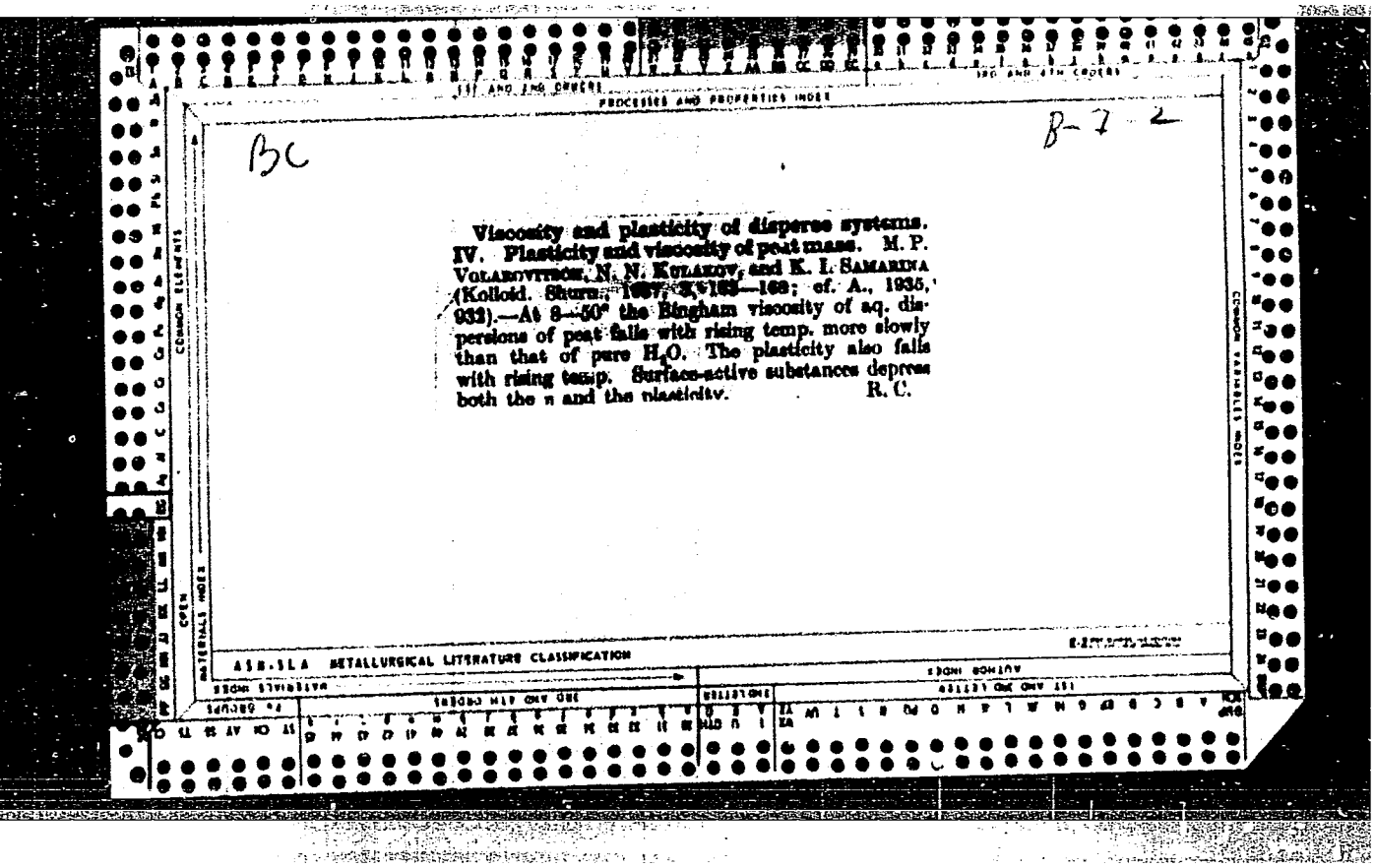
Author of article, "The Immortal Traditions of Sevastopol'," honoring the 100th anniversary of the defense of the city in the Crimean War. Sovetskiy Flot, Moscow, 17 Oct 54

SO: SUM 291, 2 Dec 1954

KNYAZEV, A.T.; VINNIK, A.T.; KULAKOV, N.N.

Control of the rotation direction of the hoist. Ugol' Ukr. 5 no.5? 17-18 My '61. (MIRA 14:5)

1. Donigiprouglemash.
(Hoisting machinery) (Automatic control)

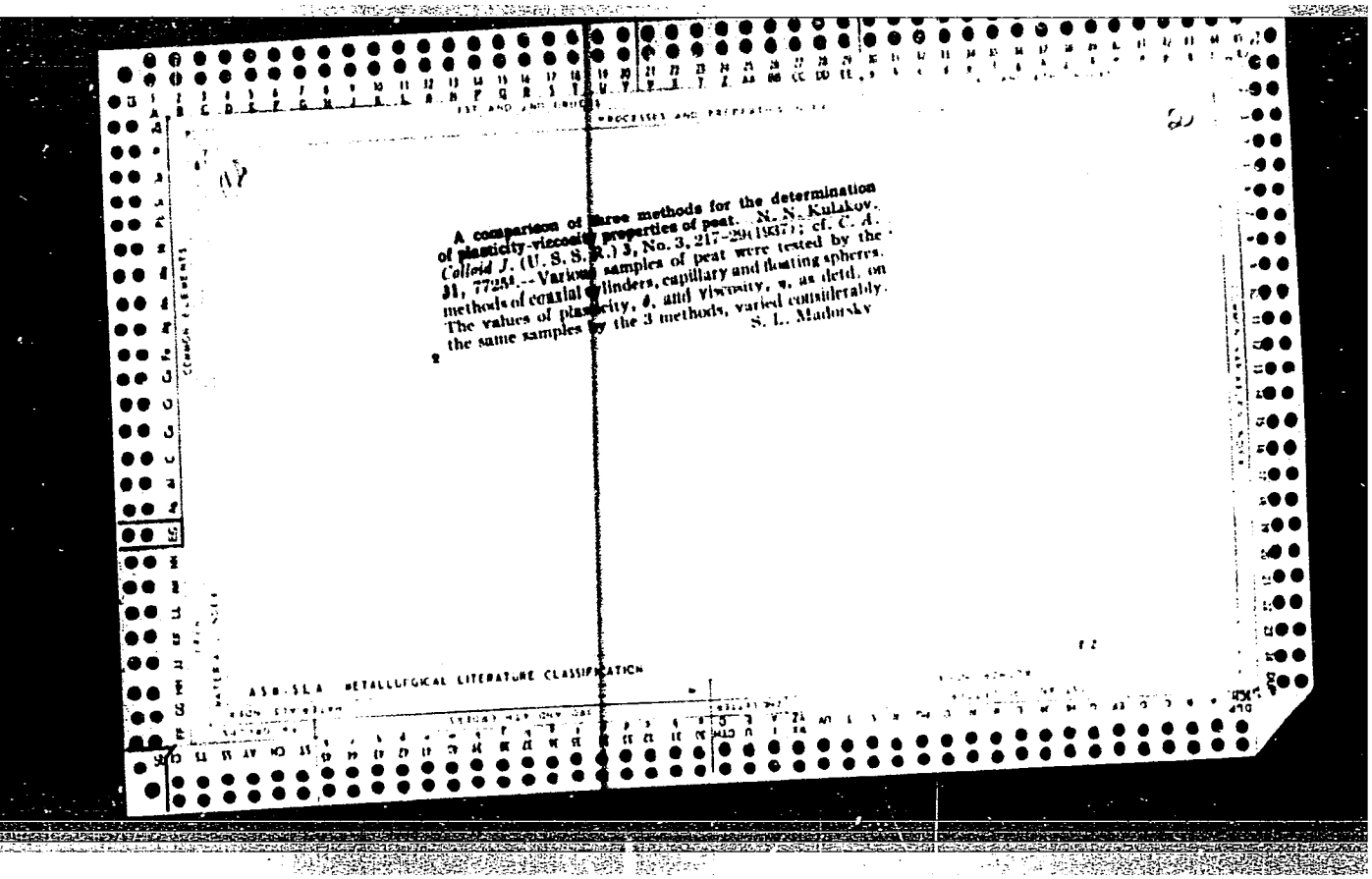


BC

B-7-2

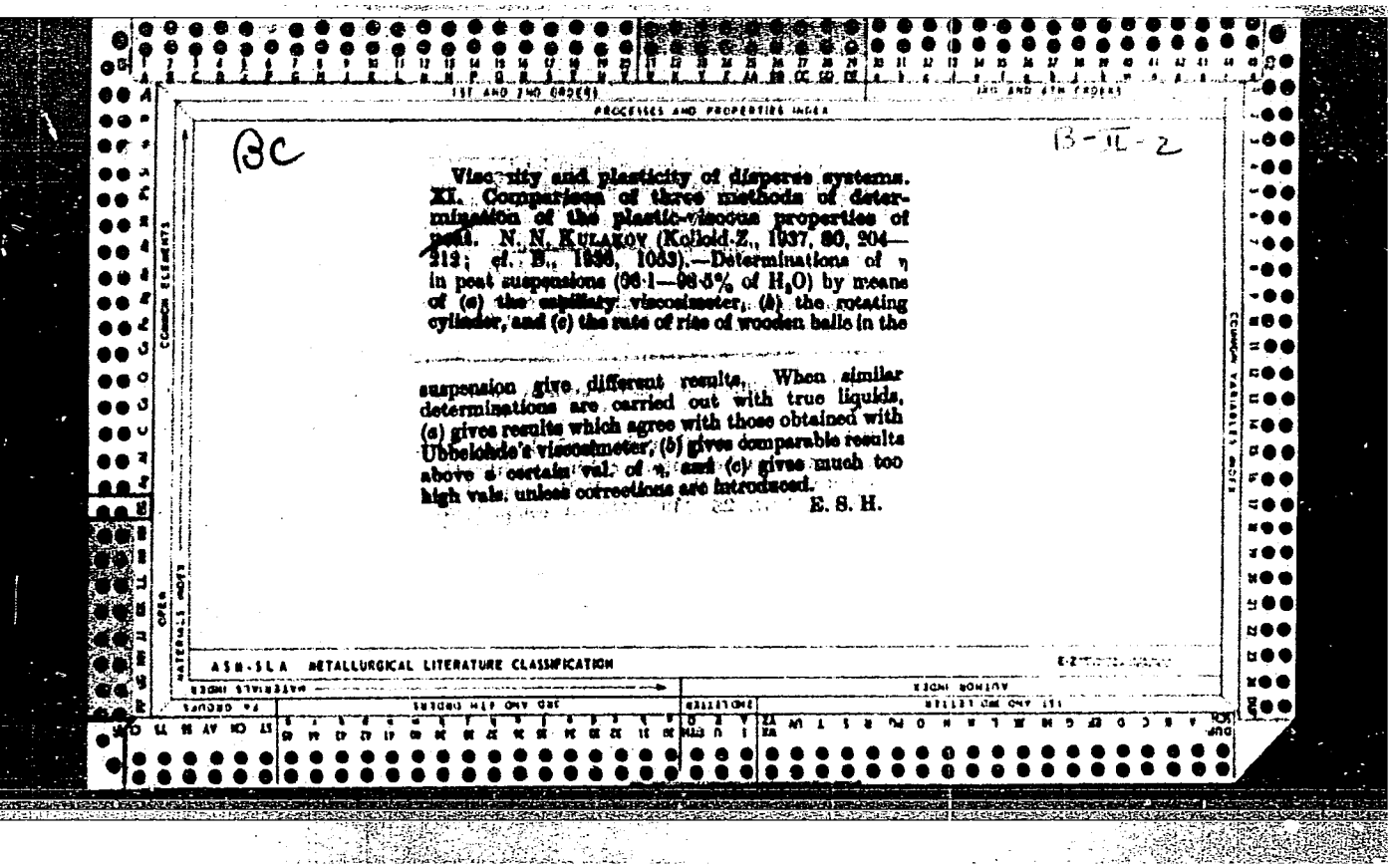
Viscosity and plasticity of disperse systems. IV. Plasticity and viscosity of peat mass. M. P. Volarovitsch, N. N. Kulakov, and K. I. Samarina (Kolloid. Shurn., 1937, 3, 163—168; cf. A., 1935, 933).—At 8—50° the Bingham viscosity of aq. dispersions of peat falls with rising temp. more slowly than that of pure H_2O. The plasticity also falls with rising temp. Surface-active substances depress both the η and the plasticity. R. C.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



A comparison of three methods for the determination of plasticity-viscosity properties of peat. N. N. Kulakov. *Colloid J.* (U. S. S. R.) 3, No. 3, 217–29 (1937); cf. C. A. 31, 7725⁴.—Various samples of peat were tested by the methods of coaxial cylinders, capillary and floating spheres. The values of plasticity, ϕ, and viscosity, η, as deter. on the same samples by the 3 methods, varied considerably.
S. L. Madorsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



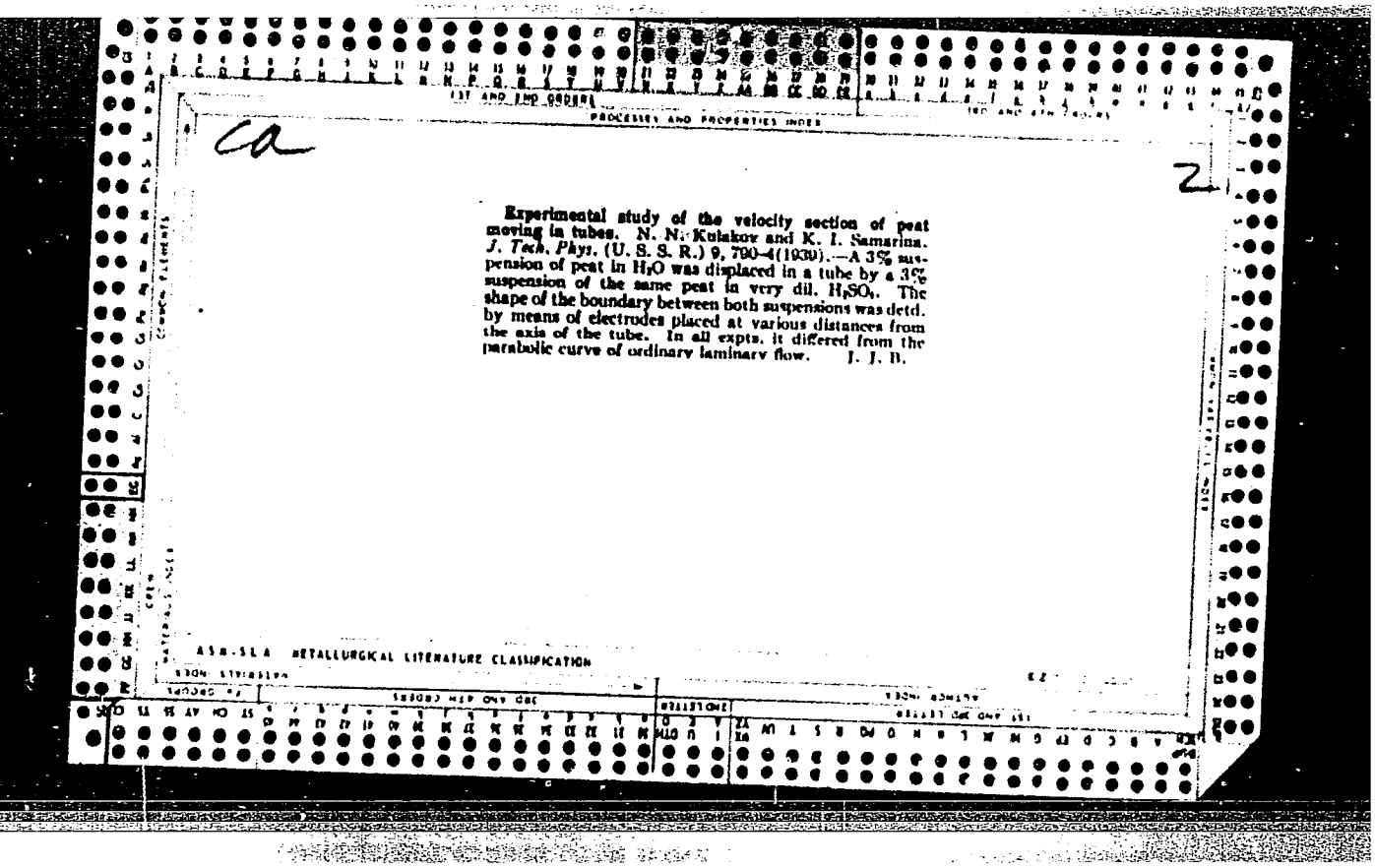
BC

B-IL-2

Viscosity and plasticity of disperse systems. XI. Comparison of three methods of determination of the plastic-viscous properties of peat. N. N. KULAKOV (Kolloid-Z., 1937, 80, 204—212; cf. B., 1936, 1053).—Determinations of η in peat suspensions (96·1—98·5% of H_2O) by means of (a) the capillary viscosimeter, (b) the rotating cylinder, and (c) the rate of rise of wooden balls in the suspension give different results. When similar determinations are carried out with true liquids, (a) gives results which agree with those obtained with Ubbelohde's viscosimeter, (b) gives comparable results above a certain val. of η, and (c) gives much too high vals. unless corrections are introduced.

E. S. H.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

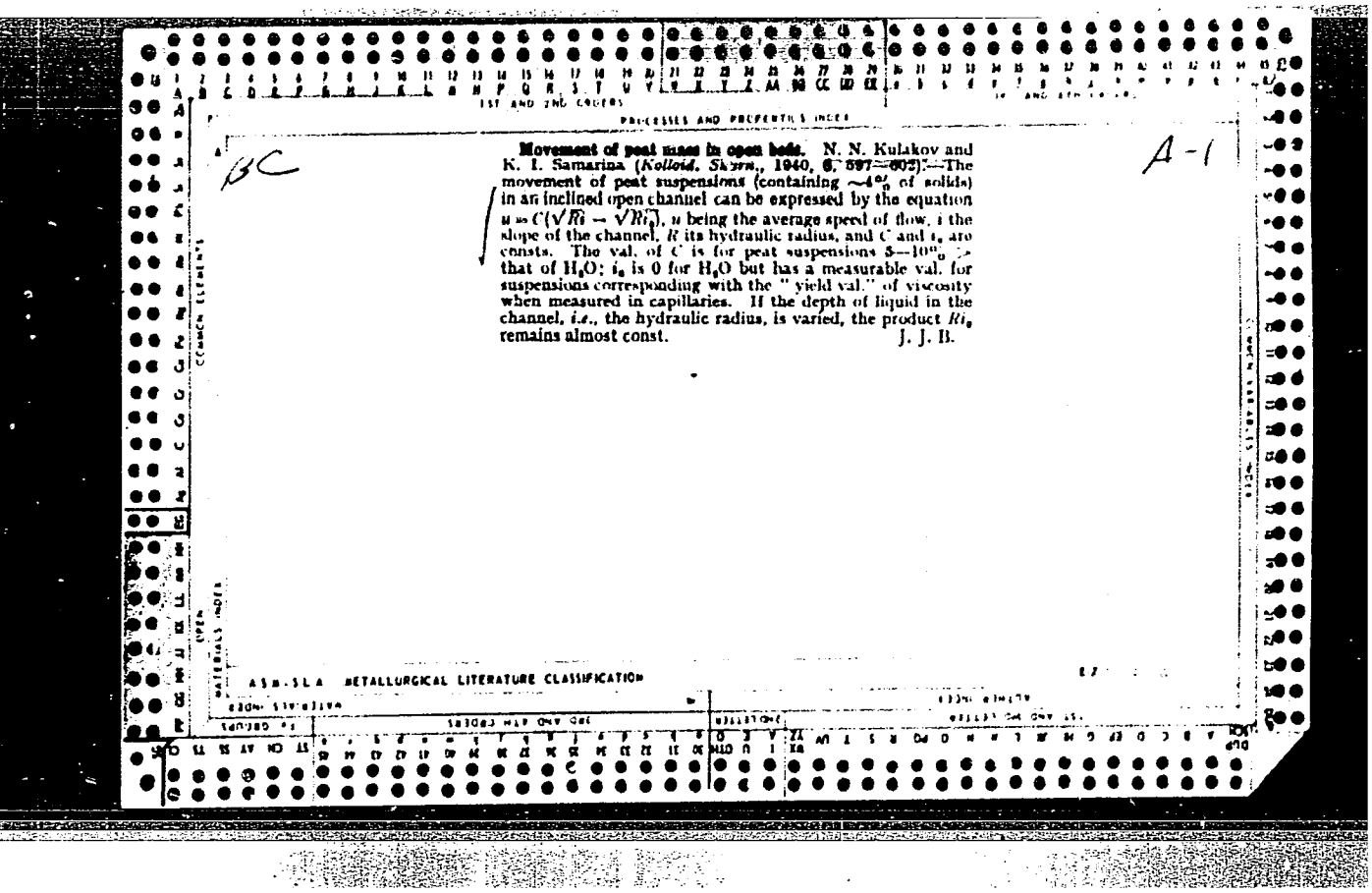


Ca

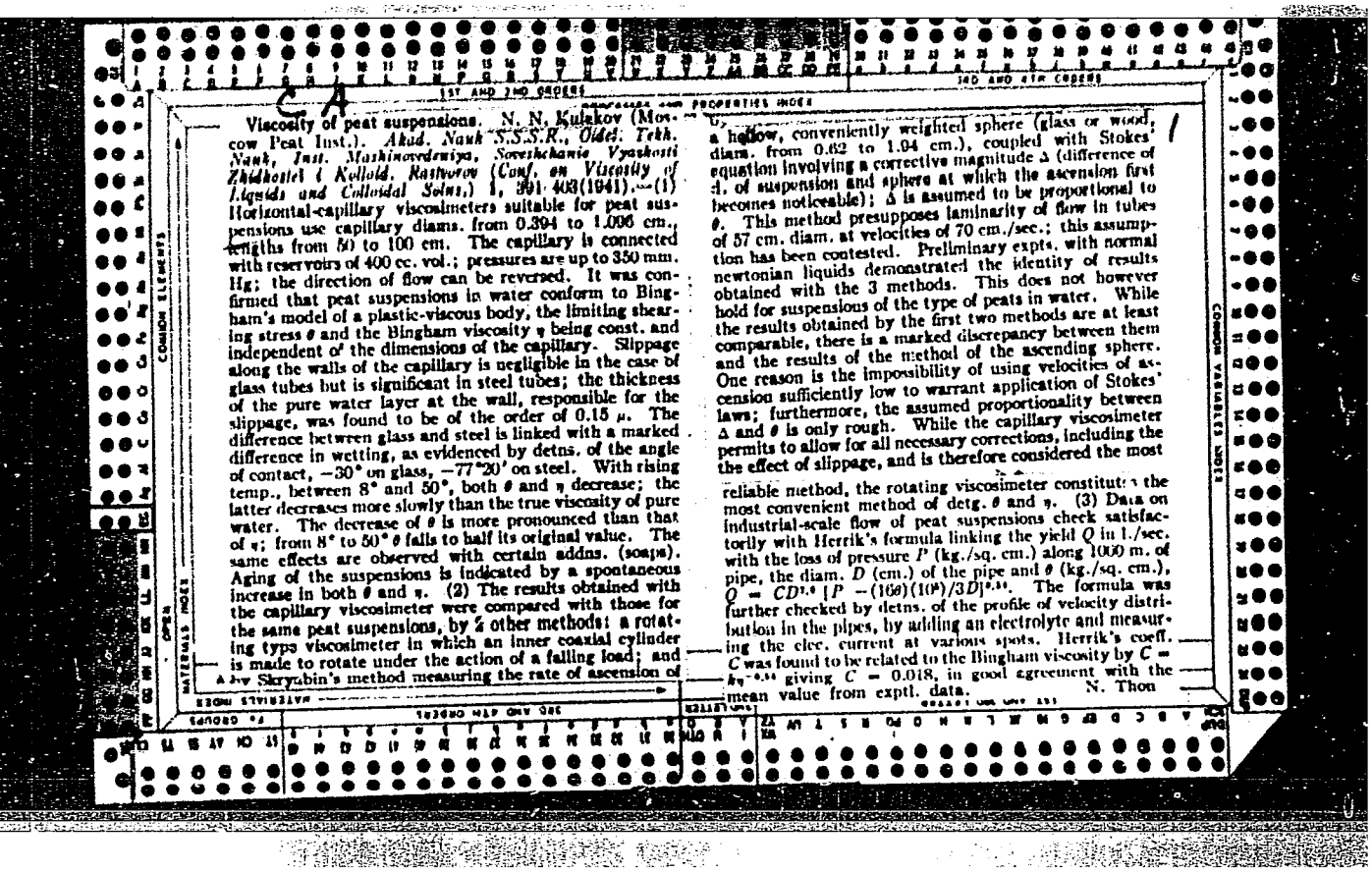
2

Experimental study of the velocity section of peat moving in tubes. N. N. Kulakov and K. I. Samarina. *J. Tech. Phys.* (U. S. S. R.) 9, 790–4(1930).—A 3% suspension of peat in H_2O was displaced in a tube by a 3% suspension of the same peat in very dil. H_2SO_4. The shape of the boundary between both suspensions was detd. by means of electrodes placed at various distances from the axis of the tube. In all expts. it differed from the parabolic curve of ordinary laminary flow. J. J. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

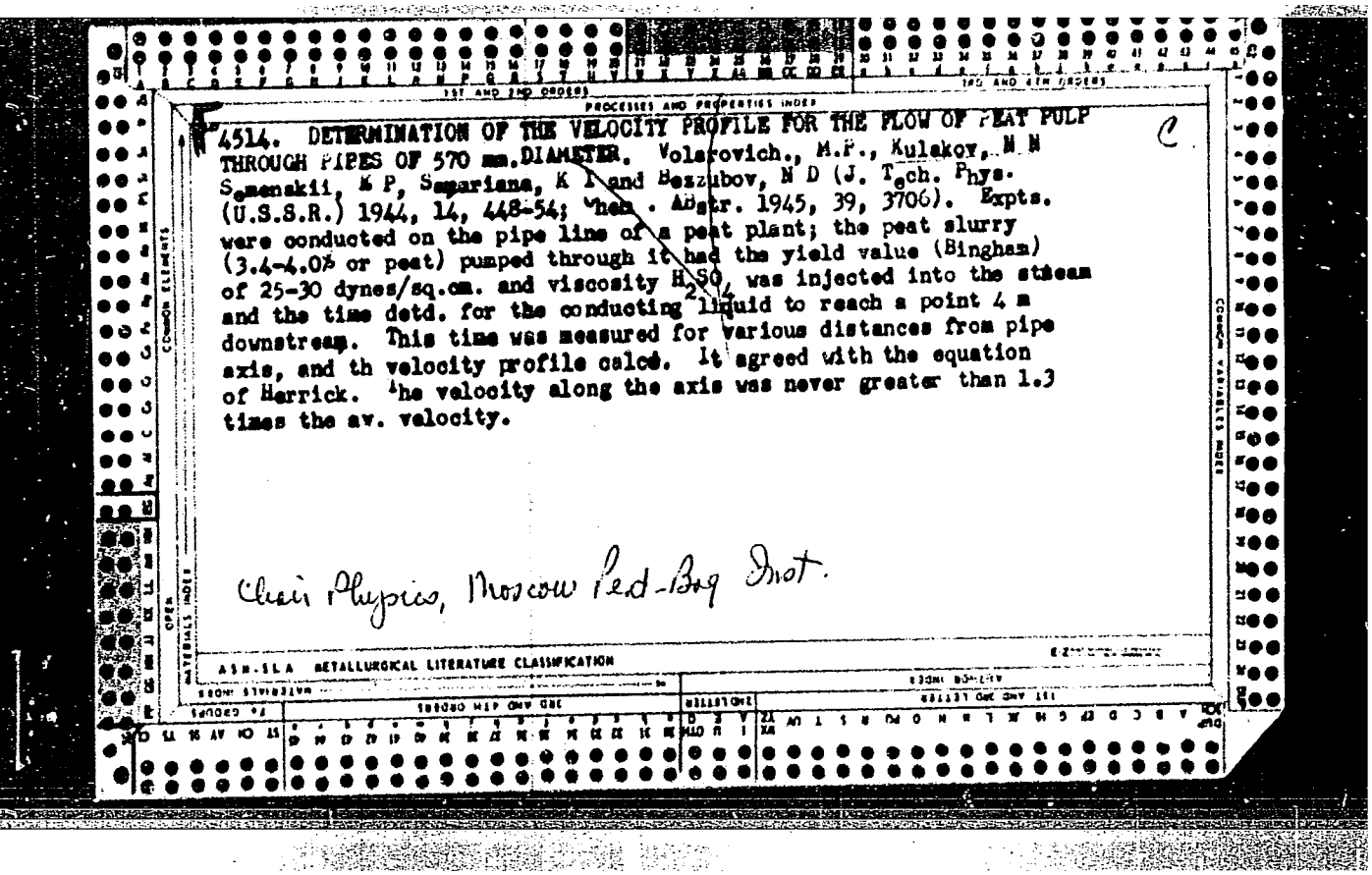


Movement of peat mass in open beds. N. N. Kulakov and K. I. Samarina (*Kolloid. Shurn.*, 1940, 6, 597–602).—The movement of peat suspensions (containing ~4% of solids) in an inclined open channel can be expressed by the equation $u = C(\sqrt{Ri} - \sqrt{Ri_0})$, u being the average speed of flow, i the slope of the channel, R its hydraulic radius, and C and i_0 are consts. The val. of C is for peat suspensions 5—10% > that of H_2O; i_0 is 0 for H_2O but has a measurable val. for suspensions corresponding with the "yield val." of viscosity when measured in capillaries. If the depth of liquid in the channel, *i.e.*, the hydraulic radius, is varied, the product Ri_0 remains almost const. J. J. B.



CA

Viscosity of peat suspensions. N. N. Kulekov (Moscow Peat Inst.). *Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk, Inst. Mashinovedeniya, Soveshchanie Vyazkosti Zhidkostei i Kolloid. Rastvorov (Conf. on Viscosity of Liquids and Colloidal Solns.)* 1, 391-403(1941).—(1) Horizontal-capillary viscosimeters suitable for peat suspensions use capillary diams. from 0.394 to 1.006 cm., lengths from 50 to 100 cm. The capillary is connected with reservoirs of 400 cc. vol.; pressures are up to 350 mm. Hg; the direction of flow can be reversed. It was confirmed that peat suspensions in water conform to Bingham's model of a plastic-viscous body, the limiting shearing stress θ and the Bingham viscosity η being const. and independent of the dimensions of the capillary. Slippage along the walls of the capillary is negligible in the case of glass tubes but is significant in steel tubes; the thickness of the pure water layer at the wall, responsible for the slippage, was found to be of the order of 0.15 μ. The difference between glass and steel is linked with a marked difference in wetting, as evidenced by detns. of the angle of contact, −30° on glass, −77°20′ on steel. With rising temp., between 8° and 50°, both θ and η decrease; the latter decreases more slowly than the true viscosity of pure water. The decrease of θ is more pronounced than that of η; from 8° to 50° θ falls to half its original value. The same effects are observed with certain addns. (soaps). Aging of the suspensions is indicated by a spontaneous increase in both θ and η. (2) The results obtained with the capillary viscosimeter were compared with those for the same peat suspensions, by 2 other methods: a rotating type viscosimeter in which an inner coaxial cylinder is made to rotate under the action of a falling load; and A. v. Skryabin's method measuring the rate of ascension of a hollow, conveniently weighted sphere (glass or wood, diam. from 0.62 to 1.04 cm.), coupled with Stokes' equation involving a corrective magnitude Δ (difference of d. of suspension and sphere at which the ascension first becomes noticeable); Δ is assumed to be proportional to θ. This method presupposes laminarity of flow in tubes of 57 cm. diam. at velocities of 70 cm./sec.; this assumption has been contested. Preliminary expts. with normal newtonian liquids demonstrated the identity of results obtained with the 3 methods. This does not however hold for suspensions of the type of peats in water. While the results obtained by the first two methods are at least comparable, there is a marked discrepancy between them and the results of the method of the ascending sphere. One reason is the impossibility of using velocities of ascension sufficiently low to warrant application of Stokes' laws; furthermore, the assumed proportionality between Δ and θ is only rough. While the capillary viscosimeter permits to allow for all necessary corrections, including the effect of slippage, and is therefore considered the most reliable method, the rotating viscosimeter constitutes the most convenient method of detg. θ and η. (3) Data on industrial-scale flow of peat suspensions check satisfactorily with Herrik's formula linking the yield Q in l./sec. with the loss of pressure P (kg./sq. cm.) along 1000 m. of pipe, the diam. D (cm.) of the pipe and θ (kg./sq. cm.), $Q = CD^{2.5}[P - (160)(10^6)/3D]^{0.55}$. The formula was further checked by detns. of the profile of velocity distribution in the pipes, by adding an electrolyte and measuring the elec. current at various spots. Herrik's coeff. C was found to be related to the Bingham viscosity by $C = \eta_B^{-0.55}$ giving $C = 0.018$, in good agreement with the mean value from exptl. data. N. Thon



4514. DETERMINATION OF THE VELOCITY PROFILE FOR THE FLOW OF PEAT PULP THROUGH PIPES OF 570 mm. DIAMETER. Volarovich., M.P., Kulakov, M N Semenskii, M P, Smariana, K I and Bezzubov, N D (J. Tech. Phys. (U.S.S.R.) 1944, 14, 448-54; Chem. Abstr. 1945, 39, 3706). Expts. were conducted on the pipe line of a peat plant; the peat slurry (3.4-4.0% or peat) pumped through it had the yield value (Bingham) of 25-30 dynes/sq.cm. and viscosity H_2SO_4 was injected into the stream and the time detd. for the conducting liquid to reach a point 4 m downstream. This time was measured for various distances from pipe axis, and th velocity profile calcd. It agreed with the equation of Herrick. The velocity along the axis was never greater than 1.3 times the av. velocity.

C

Chem Physics, Moscow Ped-Bag Inst.

1. KULAKOV, N. N.

2. USSR (600)

4. Physics and Mathematics

7. Introduction to the Physics of Peat. (Moscow-Leningrad, State Power Press, 1947). Reviewed by B. V. Deryagin and M. L. Smolyanskiy, Sov. Kniga, No. 10, 1948.

9. [redacted] Report U-3081, 16 Jan. 1953. Unclassified.

ALEKSEYEV, Yu.V.; ASTAF'YEV, A.F.; POPOV, O.A.; Prinimali uchastiye: AGAYEV, A.G.; REBROV, A.G.; KULAKOV, N.N.

Adopting the roasting of nickel concentrates in a fluidized bed at the "Severonikel'" Combine. TSvet. met. 36 no.7:35-42 Jl '63. (MIRA 16:8)

(Nickel--Metallurgy) (Fluidization)

KULAKOV, N.N.; ZAGORUYKO, A.S.

Improving the reliability of nonrepairable articles, their economic efficiency and time in which they pay for themselves. Izv. SO AN SSSR no.6. Ser. tekh. nauk no.2:54-58 '65.

Determining the economic efficiency and profit return time for reconditioned systems in increasing their reliability. Ibid.:59-66 (MIRA 18:11)

1. Institut avtomatiki i elektrometrii Sibirskogo otdeleniya AN SSSR, Novosibirsk.

L 5148-66 EWT(1/EWA(h) TG
ACCESSION NR: AP5023657 UR/0119/65/000/008/0021/0023
621.3.019.3

22
B

AUTHOR: Kulakov, N. N. (Engineer)

TITLE: Optimal reliability of expendable components used in rebuilding various systems

15

SOURCE: Priborostroyeniye, no. 8, 1965, 21-23

TOPIC TAGS: reliability, optimal reliability

ABSTRACT: A theoretical investigation is reported of the expediency of using high-reliability expendable components in restoring various systems. Methods are developed for determining the optimal reliability and the required amount of reserve components for a specified cost of the components, or vice versa, determining the cost for a specified reliability. The cost of a high-reliability components depends on its basic cost, on the existing reliability level, on the average time to failure of the component and its prototype, and on an empirical coefficient (0--2). The optimal reliability is found to be dependent on the empirical coefficient and on the time the component has been in operation. Graphic material facilitating optimal reliability calculations is supplied. Orig. art. has: 4 figures and 13 formulas.

Card 1/2

090107-30

L 5148-66
ACCESSION NR: AP5023657

ASSOCIATION: none

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

NO REF SOV: 003 OTHER: 000

Card 2/2

YAGOLUYKO, A.S. (Novosibirsk); KULAKOV, P.N. (Novosibirsk)

Selection of an optimal method for increasing the reliability of nonrestorable devices according to a given value. Avtometriia no.3:113-117 '65. (MIRA 19:1)

1. Submitted Feb. 26, 1965.

L 40909-66 EWT(d)/EWT(l)/EEC(k)-2/EWP(v)/EWP(k)/EWP(h)/EWP(l) BC

ACC NR: AP6009937 SOURCE CODE: UR/0118/65/000/011/0025/0026

AUTHOR: Bukhtiarov, V. A. (Engineer); Zhuk, I. N. (Engineer); Kulakov, N. N. (Engineer); Lozovoy, Ye. K. (Engineer); Malich, V. V. (Engineer); Napreychikov, F. I. (Engineer)

57
B

ORG: none

TITLE: Inductive relay for signaling, control, and telemetry

SOURCE: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 11, 1965, 25-26

TOPIC TAGS: electric relay, circuit design, telemetry equipment, automatic control equipment

ABSTRACT: The authors introduce a universal and stable inductive sensor which has a high degree of reliability and sensitivity. The inductive relay (sensor) proposed is intended for signaling, control, and telemetry. The device is based on a transistorized oscillator with tuned circuits in the base circuitry and on an emitter capable of operating in a "quasi-trigger" and intermittent oscillating mode. The all-purpose relay may be used in automatic control, monitoring and alarm systems, telemetry systems, and at unattended beacons. The output may be an electromagnetic relay or a contactless relay device of any type. The oscillator is distinguished by a high degree of frequency stability in all modes and uses a series-produced

UDC: 621.3.083:669.001.6

L 40900-66
ACC NR: AP6009937

P16 transistor (16 to 350 kc). The basic specifications of the inductive relay are: operating frequency: 25 kc; sensitivity: 150—200 mm; length of connecting wire to oscillator: up to 50 m; a 24-v dc MKU-48 relay; and a 220-v ac 50-cps feed voltage. Orig. art. has: 3 figures.

SUB CODE: 09/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

Card 2/2 MLP

L 05865-67 EWP(k)/EWP(h)/EWT(d)/EWT(l)/EWP(v)/EWP(l) TG

ACC NR: AP6015325 (N) SOURCE CODE: UR/0410/65/000/003/0113/0117

AUTHOR: Zagoruyko, A. S. (Novosibirsk); Kulakov, N. N. (Novosibirsk)

ORG: none

TITLE: Choice of the optimal method of increasing the reliability of nonrestorable devices to a prescribed value

SOURCE: Avtometriya, no. 3, 1965, 113-117

TOPIC TAGS: cost estimate, system reliability, circuit reliability

ABSTRACT: The authors attempt to find an optimal (from the point of view of cost) method for increasing to a prescribed value P_H the reliability of a multi-component nonrestorable device (such as might be found in an information metering system), and to determine the proper interrelations between the reliability, cost, and number of redundant components. A critique is given of a previous work (N. A. Shishonok, V. F. Repkin, L. L. Barvinskiy. Osnovy teorii nadezhnosti i ekspluatatsii radio-elektronnoy tekhniki. M., Izd-vo "Sovetskoye radio", 1964) which contains a somewhat different approach to the same problem. The method proposed in this paper seeks to determine the cost of a nonrestorable device, as reliability is increased, through the use of a mathematical model in which cost is represented as a function of reliability

UDC: 621.3.019.3:621.37/39.003.13.004.15

Card 1/2

L 05865-67
ACC NR: AP6015325

parameters. An example of the application of the method is included. Orig. art. has: 2 figures and 12 formulas.

SUB CODE: 09,14/ SUBM DATE: 26Feb65/ ORIG REF: 001

kh

Card 2/2

ACC NR: AP7002237 (A) SOURCE CODE: UR/0280/66/000/006/0064/0072

AUTHOR: Kulakov, N. N. (Novosibirsk); Zagoruyko, A. S. (Novosibirsk)

ORG: none

TITLE: Method for determining the optimum distribution of reliability between individual elements of a system

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 6, 1966, 64-72

TOPIC TAGS: reliability system, approximation method, quality control, reliability, system reliability

ABSTRACT: A method is proposed for solving two optimum problems through balancing the sensitivities in the individual element of the system for various cases of increasing their reliability. The concept of the sensitivity of the system is the basic concept of this method and was evaluated elsewhere (Breipol, A. M. Unique application of required component reliability. Proc. 7th Nat. Symposium on Reliability and Quality Control in Electronics. 1961, 1). When an exact solution

Card 1/2

ACC NR: AP7002237

of the problem cannot be obtained analytically, the method of successive approximations is proposed. In most cases only three steps are needed for a sufficient approximation of the results sought for. [Based on authors' abstract] [GC]

SUB CODE: 12, 10/SUBM DATE: 01Jul65/ORIG REF: 002/OTH REF: 001/

Card 2/2

KULAKOV, Nikolay Pavlovich; IOFFE, S.Ye., redaktor; ZAV'YALOV, G.P., redaktor; OYSTRAKH, V.G., tekhnicheskiy redaktor

[The communists are the organizers of the struggle for coal; the work practice of the Party group in the Kalinin Mine of the "Karagandaugol'" combine] Kommunisty - organizatory bor'by za ugol'; kombinata "Karagandaugol'. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 14 p. (MLRA 9:10)

(Communist Party of the Soviet Union--Party work)
(Coal mines and mining)

[redacted], V.A., kand. tekhn. nauk; [redacted], N.F., insh.; [redacted], red., kand. tekhn. nauk; [redacted], A.S., insh.

Investigation of the performance of drum-type actuating mechanisms with chain drive. Izv. vys. ucheb. zav.; gor. zhur. 7 no.11:79-86 '64. (MIRA 18:3)

1. Institut Giprouglegormash. Rekomendovana kafedroy gornykh mashin Sverdlovskogo gornogo instituta.

KULAKOV, N.V.; [illegible]'YEV, T.F., doktor geol.-miner. nauk, nauchn. red.

[Paleohydrogeological conditions governing the formation of gas and oil fields as revealed by a study made in the Volga Valley portion of Saratov and Volgograd Province] Paleogidrogeologicheskie usloviia formirovaniia gazoneftianykh mestorozhdenii (na primere Saratovsko-Volgogradskogo Povolzh'ia, Moskva, Nedra, 1964. 193 p. (MIRA 17:9)

KULAKOV, N.V.

Underground water supply in the trans-Volga protion of Saratov Province. Uch.zap.SGU 65:205-207 '59. (MIRA 16:1)
(Saratov Province--Water, Underground)

KULAKOV, N.V.

Problems of paleohydrology and prospecting hydrochemistry in the lower Volga Valley. Trudy NVNIIGG no.1:7-9 '64.

Hydrodynamic conditions for the migration of liquefied hydrocarbons. Ibid.:10-20

(MIRA 18:6)

KULAKOV, N.V., [illegible]

Dynamics of the vertical migration of fuel gas. Geol. nefti i gaza 8 no.3:21-25 Mr '64. (MIRA 17:6)

1. Nizhne-Volzhskiy nauchno-issledovatel'skiy institut geologii i geofiziki.

KULAKOV, O.I.

Cleaning of spiral coolers. Khim. prom. no.4:74 O-D '64.
(MIRA 18:3)

KULAKOV, O.I.; DMITRENKO, G.S. [Dmytrenko, H.S.]

Automatic control of the SO_2 content of gas by its temperature.
Khim.prom. [Ukr.] no.2:80 Ap-Je '65.
(MIRA 18:6)

KULAKOV, P.

USSR/Miscellaneous - Voluntary Defense Societies

Card 1/1 Pub. 89 - 1/40

Authors : Kulakov, P., Acting Chairman of the Central Committee of the DOSAAF of USSR

Title : For further improvement of the DOSAAF's work

Periodical : Radio 10, 1-2, Oct 1954

Abstract : In appraising the part played by the DOSAAF (a Voluntary Society for Assistance to the Armed Forces) in national defense, the author points out a number of weak points of this society's activities. The author also calls for improvement of the work of collective farms and party organizations and for better coordination between the activities of these organizations and DOSAAF.

Institution: .....

Submitted: .....

KULAKOV, P. (Leningrad)

Economizing metal in manufacturing umbrellas. Prom.koop.no.5:23 My '56. (MLRA 9:9)

1.Nachal'nik shtampovochnogo tsekha arteli "Pobeda No.1". (Leningrad--Umbrellas and parasols)

KULAKOV, P.

Incident in Novo-Il'inovka. Sov. foto 18 no.4:17 Ap '58.
(MIRA 11:6)
(Novo-Il'inovka--Photography))

KOZLOV, V., mayor; SHCHEULIN, N., kapitan; KULAKOV, P., starshiy leytenant

The commanding officer and the work of a Communist Youth League organization; from experience. Voen. vest. 38 no.7:25-30 Jl '58. (MIRA 11:6)

(Military education) (Communist Youth League)

[illegible], I. A.

Estimates for large scale works for the purpose of determining the cost of irrigation. Samarkand, 1934. 116 p. (54-46974)

TC909.K8

KULAKOV, P.A., inzh.; ABAKUMOVA, A.S., inzh.

The concrete of the hydraulic structures of the Volgograd hydroelectric development. Gidr. stroi. 32 no.12:11-13 D '61. (MIRA 15:2)
(Volga hydroelectric power station (22nd Congress of the CPSU)--(Concrete))

CHASHCHIN, A.M.; KULAKOV, P.I., inzhener antikorroziynoy sluzhby

Equipment corrosion control. Gidroliz. i lesokhim. prom. 8 no.4:22-23 '55. (MLRA 8:9)

1. Glavnyy inzhener Dmitriyevskogo lesokhimicheskogo zavoda (for Chashchin). (Wood—Chemistry) (Corrosion and anticorrosives)

KULAKOV, P.I.

Replacing copper in the equipment used for the production of acetic acid and butyl acetate. Gidroliz.i lesokhim.prom. 13 no.5:24-26 '60. (MIRA 13:7)

1. Dmitriyevskiy lesokhimicheskiy zavod.
(Wood--Chemistry) (Acetic acid)

SYCHEV, K.V., general-mayor; GRYLEV, A.N., polkovnik; OGAREV, P.K., polkovnik; BOGDANOV, A.R., polkovnik; TRAKTUYEV, M.I., polkovnik; SKRIPCHENKO, N.I., polkovnik; IVANOV, M.A., polkovnik; KULAKOV, P.M., polkovnik; SHAMRAYEV, A.M., podpolkovnik; VLASOV, I.G., polkovnik v otstavke; KRIVULIN, P.N., polkovnik v otstavke; D'YAKOV, V., starshiy leytenant zapasa; MALAKHOV, M.M., polkovnik, redaktor; GNEDOVETS, P.P., redaktor; MYASNIKOVA, T.F., tekhnicheskiy redaktor.

[Rifle units and the regiment in various phases of combat; a collection of tactical examples from the Great Patriotic War] Strelkovye podrazdeleniia i polk v razlichnykh vidakh boia; sbornik takticheskikh primerov iz Velikoi Otechestvennoi voiny. Moskva, Voen.izd-vo M-va obor.SSSR, 1957. 230 p. (MIRA 10:11)
(Infantry drill and tactics)

ORLOVSKIY, Ye.L.; MEDNIKOV, Yu.I.; KULAKOV, P.N.; SHCHELOVANOV, L.N.

Contrast sensitivity and half-tone reproduction in picture transmitting systems. Elektrosviaz' 16 no.10:45-55 O '62. (MIRA 15:9)

(Phototelegraphy)

KULAKOV, P.Ye.; GRIGOR'YEV, G.M.

Motor and evacuatory function of the resected stomach with small intestine enteroplasty in the early postoperative period. Khirurgiia 39 no.6:107-111 Je '63. (MIRA 17:5)

1. Iz khirurgicheskogo otdeleniya (zav. M.V. Khanyayeva) Shumerlinskoy rayonnoy bol'nitsy (glavnyy vrach P.Ye. Kulakov) Chuvashskoy ASSR.

KULAKOV, P. Ye.

Methodology of the resection of the stomach replacing it with the loop of the jejunum. Khirurgiia 40 no.9:16-19 S '64
(MIRA 18:2)

1. Khirurgicheskoye otdeleniye (zav. N.V. Khanyayeva) Shumerlinskoy rayonnoy bol'nitsy Chuvashskoy ASSR i 2-ya kafedra khirurgii (nauchnyy rukovoditel' - dotsent Yu.I. Zak) TSentral'nogo instituta usovershenstvovaniya, Moskva.

KULAKOV, P.Ye.

Spontaneous bladder rupture. Kaz.med.zhur. no.1:59 Ja-F'63.
(MIRA 16:8)
1. Khirurgicheskoye otdeleniya Shumerlinskoy rayonnoy bol'nitsy Chuvashskoy ASSR (zav. - M.V.Khanyayeva).
(BLADDER--RUPTURE)

KULAKOV, P.Ye. (Chuvashskaya ASSR)

Hemorrhage and necrosis of a loop of the small intestine as a result of the uncontrolled use of dicoumarin. Klin.med. 40 no.5:133-134 '62. (MIRA 15:8)

1. Iz khirurgicheskogo otdeleniya (zav. M.V. Khanyayeva) Shumerlinskoy rayonnoy bol'nitsy Chuvashskoy ASSR.
(COUMARIN--TOXICOLOGY) (GASTROINTESTINAL HEMORRHAGE)
(INTESTINES--NECROSIS)

KULAKOV, P. Ye. (Shumerlya, Chuvashskoy ASSR, Krasnoarmeyskaya ul., 1-a)

Invagination of the small intestine into the resected stomach through Braun's anastomosis. Vest. khir. 92 no.1:84 Ja '64. (MIRA 17:11)

1. Iz khirurgicheskogo otdeleniya (zav. - M.V. Khanyayeva) Shumerlinskoy rayonnoy bol'nitsy (glavnyy vrach - P.Ye. Kulakov) Chuvashskoy ASSR.

GUSEVA, A.N.; KULAKOV, S.I.

Organic matter of rocks in the Ishim alkaline massif. Vest.Mosk. un.Ser. 4: Geol. 16 no.3:71-73 My-Je '61. (MIRA 14:6)
(Kazakhstan—Rocks—Analysis) (Organic matter)

BREGER, A.Kh.; Prinimali uchastiye: KARPOV, V.L., kand.khim.nauk; BELYNSKIY, V.A.; OSIPOV, V.B., PROKUDIN, S.D.; TYURIKOV, G.S., kand.khim.nauk; GOL'DIN, V.A.; RYABUKHIN, Yu.S.; KOROLEV, G.N.; AFONIN, V.P.; POKROVSKIY, V.S.; KULAKOV, S.I.; LEKAREV, P.V.; FEDOROVA, T.P.; KOROTKOVA, M.A.; KHARLAMOV, M.T.; NIKOLENKO, G.D.; LOPUKHIN, A.F.; YEVDOKUNIN, T.F.; KASATKIN, V.M.; RATOV, A.V.

Nuclear radiation sources for radiational-chemical studies. Probl.fiz.khim. no.1:61-72 '58. (MIRA 15:11)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. Karpova.
(Radiochemistry) (Radioisotopes)

TROP, Abram Yefimovich; KULAKOV, S.N., redaktor; LUCHKO, Yu.V., redaktor; KOVALENKO, N.I., tekhnicheskiy redaktor.

[Electric equipment and power supply for concentration plants] Elektrooborudovanie i elektrosnabzhenie obogatitel'nykh fabrik. Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1955. 352 p.[Microfilm] (MLRA 9:1) (Electric machinery) (Ore dressing)

BELYKH, Boris Petrovich, dotsent; CHEKANOV, Vasiliy Demidovich, inzh.; AKHLYUSTIN, V.K., kand.tekhn.nauk, retsenzent; PETROV, I.P., dotsent; KULAKOV, S.N., inzh., red.; LUCHKO, Yu.V., red. izd-va; ZEF, Ye.M., tekhn.red.

[Electric engineering in mines] Gornaia elektrotekhnika. Sverdlovsk, Gos. nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1958. 575 p. (Electricity in mining) (MIRA 12:1)

KULAKOV, S.N., inzh.

Electric lighting standards for underground workings of nonferrous metal mines. Svetotekhnika 4 no.4:11-15 Ap '58. (MIRA 11:4)

1.Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut "Unipromed'."

(Mine lighting--Standards)

SOV/94-58-11-13/28

AUTHOR: Kulakov, S.N., Engineer

TITLE: The Construction of Pole-Mounting Transformer Sub-Stations for Voltages of 3-10 kV (O konstruktsii stolbovykh transformatornykh podstantsiy napryazheniyem 3-10 kV)

PERIODICAL: Promyshlennaya Energetika, 1958, Nr 11, pp 28-29 (USSR)

ABSTRACT: It was announced in Promyshlennaya Energetika Nr 5, 1957 that the inter-departmental Expert-Technical Council had agreed to a typical design for a pole-mounting transformer substation of 50-100 and 80 kVA, 6-10/0.5 kV developed by Giprotorf. This article criticises the design and gives seven reasons why it is inacceptable. The main defect is that the power transformer is installed on a special platform at a considerable height. These authors propose a simpler construction which is illustrated by a sketch. Sub-stations of this kind have been extensively used at the Degtyarka Copper Mine. The transformers and isolators used are described and general advice is given about construction. The main advantages claimed for this type of sub-station are

Card 1/2

The Construction of Pole-Mounting Transformer Sub-Stations for Voltages of 3-10 kV

that its construction is simple, less timber is required, less labour is required for erection and it is cheaper in operation. There is 1 figure.

KULAKOV, S.N., inzh.

Comments on the arrangement of electric lighting of transformers substations. Svetotekhnika 5 no.6:27 Je '59. (MIRA 12:8)

1. Unipromed', g.Sverdlovsk.
(Electric substations) (Electric lighting)

ARSHINSKIY, V.M.; BAGAUTINOV, G.A.; BESPALOV, M.V.; GASPAROVICH, P.I.; GOLOMIDOV, I.N.; GOLUBOV, G.B.; GRIN, L.T.; ZEL'SKIY, S.A.; IL'INYKH, A.F.; KOZIN, V.Z.; KRYUKOV, V.P.; KULAKOV, S.N.; LUKAS, V.A.; MINEYEV, V.A.; PETROV, Yu.S.; PIRUSHKO, M.G.; PROKOF'YEV, Ye.V.; REBETS, B.A.; STARTSEV, N.V.; TROP, A.Ye., prof.; KHRAMOV, V.A.; ABRAMOV, V.I., otv. red.; PROZOROVSKAYA, V.L., tekhn. red.; BOLDYREVA, Z.A., tekhn. red.

[Handbook on electric equipment for mines] Spravochnik gornogo elektrotekhnika. Pod obshchei red. A.E.Tropa. Moskva, Gosgortekhizdat, 1962. 400 p. (MIRA 16:5)
(Electricity in mining)

ZHUNINA, L.A., kand.tekhn.nauk, dots.; KULAKOV, S.S., inzh.

Manufacturing dark colored glass from waste materials from the manufacture of polished and armored glass. Sbor.nauch.rab. Bel.politekh.inst. no.63:75-85 '58. (MIRA 12:4)
(Glass manufacture)

KULAKOV, S.S.; KUZNETSOVA, Z.N.; DUDAREVA, N.F.

Packet method of setting and unloading ceramic stones.
Stroi. mat. 11 no. 12:19-20 D '65. (MIRA 18:12)

1. Glavnyy inzhener Vitebskogo kombinata stroymaterialov (for Kulakov). 2. Nachal'nik otdela tekhnicheskogo kontrolya i laboratorii Vitebskogo kombinata stroymaterialov (for Kuznetsova). 3. Starshiy inzhener Vitebskogo kombinata stroymaterialov (for Dudareva).

KULAKOV, T.

Concerning A.M. Sachkov's articel "Maintenance of outpatient registration files at feldsher and feldsher-midwife centers." Fel'd. i akush. 24 no.12:56 D '59. (MIRA 13:2)

(HOSPITALS--OUTPATIENTS SERVICES)

KULAKOV, V.A.

Interests of schools and collective farms are inseparable.
Politekh.obuch. no.5:24-30 My '59. (MIRA 12:7)

1. Predsedatel' kolkhoza "Rossiya" Yantikovskogo rayona Chuvashskoy ASSR.
(Yantikovo District--Building trades--Study and teaching)

BLANTER, M. E.; KULAKOV, V. A.; SERGHELICEV, I. M.(Sergeychev, I. M.

Hardeing of steel massive items in the mixtures of air and water.
Analele matalurgie 16 no.1:170-182 Ja-Mr '62

SOV/124-58-10-11755

Translation from: Referativnyy zhurnal, Mekhanika. 1958, Nr 10. p 145 (USSR)

AUTHOR: Kulakov, V. F.

TITLE: Some Problems of Designing Frame-type Structures for Earthquake Areas (Nekotoryye voprosy proyektirovaniya ramnykh konstruktsiy v seysmicheskikh rayonakh)

PERIODICAL: Izv. AN TurkmSSR, 1957, Nr 2, pp 30-38

ABSTRACT: Stress and strain variations in a reinforced-concrete, two-level, single span frame structure are examined as functions of its over-all dimensions and of the load and rigidity ratios employed. Nine different versions involving varying ratios of masses and floor elevations were calculated for frames with constant span, height, and chord-member cross section; also, a different rigidity ratio was employed for each version, all versions being designed for a condition when the footing executes a damped sinusoidal motion. It was found that the distribution of the rigidity among the vertical posts considerably influences the deformations and stresses in the frame, and that the floor levels must be reinforced in such a manner as to ensure that the rate of increase of deformations becomes greater with elevation.

Card 1/2

SOV/124-58-10-11755

Some Problems of Designing Frame type Structures for Earthquake Areas

It was also established that frames having maximal dynamic rigidity offer certain advantages when subjected to vibrations beyond their own resonant frequency, whereas flexible structures experience smaller shearing forces as their resonant frequency is approached. It is shown that deformations of frame members are directly proportional to the displacement of the footing. If the loads are concentrated at the upper floor levels, the frame is subjected to smaller displacements at its own resonant frequency than beyond the resonant frequency.

B. K. Karapetyan

Card 2/2

LUTSKOV, V.F., Cand Tech Sci--(diss) "Certain problems of planning of reinforced concrete frame buildings for seismic regions." Kuybyshev, 1958. 12 pp (Acad of Construction and Architecture USSR. Central Sci Res Inst of Building Construction), 150 copies (KL, 35-58, 147)

-57-

KULAKOV, V.F.

SOV/124-58-5-6019

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 148 (USSR)

AUTHOR: Kulakov, V.F.

TITLE: Some Considerations on the Rigidity Distribution of the Component Elements of Multifloor Reinforced-concrete Frames Subject to the Action of Seismic Stresses (Nekotoryye voprosy raspredeleniya zhestkostey elementov mnogoetazhnykh zhelezobetonnykh ram, podvergayushchikhsya vozdeystviyu seysmicheskikh sil)

PERIODICAL: Izv. AN TurkmSSR, 1957, Nr 5, pp 59-68

ABSTRACT: Bibliographic entry

1. Structures--Stability 2. Earthquake resistant structures--Stresses 3. Seismic waves

Card 1/1

SHILOV, P.I., prof.; KOROSTOVTSEV, S.B., kand.med.nauk; KULAKOV, V.I.

Advantages of gastrography and gastroscopy as compared with roentgenological examination in the diagnosis of functional and organic gastric changes in certain diseases of the stomach. Terap.arkh. 31 no.12:3-9 D '59. (MIRA 13:4)

1. Iz kafedry terapii dlya usovershenstvovaniya vrachey (nachal'nik - prof. P.I. Shilov) Voyenno-meditsinskiy ordena Lenina akademii imeni S.M. Kirova.
(STOMACH dis.)

FARBER, V.B.; KULAKOV, V.I.

Problem of the combination of leukemias with neoplastic processes.
Probl.gemat.i perel.krovi 5 no.6:56-61 Je '60.
(MIRA 13:12)

(LEUKEMIA) (TUMORS)

KULAKOV, V.I., kand.med.nauk; PLETNEVA, V.A.; ZAKHAROV, F.G.

Spontaneous duodeno-colonic fistula in peptic ulcer of the duodenum. Vest.khir. no.9:130-131 '61. (MIRA 15:3)

1. Iz 1-y terapevticheskoy kliniki usovershenstvovaniya vrachey (nach. - prof. P.I. Shilov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova i khirurgicheskogo otdeleniya Leningradskogo ordena Lenina voyennogo gospitalya.
(FISTULA) (DUODENUM--ULCERS)

POYDENKO, V.K.; KULAKOV, V.I., student

Earliest results of the treatment of cancer of the cervix uteri. Nauch.trudy Chetv.Mosk.gor.klin.bol'. no.1:320-325 '61. (MIRA 16:2)

1. Iz ginekologicheskoy kliniki (zav. - prof. V.N. Vlasov) kafedry akusherstva i ginekologii pediatricheskogo fakul'teta (zav. - prof. A.A. Lebedev) 2-go Moskovskogo gosudarstvennogo meditsinskogo instituta imeni N.I. Pirogova na baze Moskovskoy gorodskoy klinicheskoy bol'nitsy No.4 (glavnyy vrach G.F. Papko).
(UTERUS—CANCER) (UTERUS—SURGERY)

KILARSKIY, V.I.

Some experimental data on the effect of therapeutic aminazine doses on rabbits. Nauch. trudy Riaz. med. inst. 15:49-52 '62. (MIRA 17:5)

1. Kafedra patologicheskoy anatomii (zav. kafedroy - prof. V.P.Beletskiy) Kuybyshevskogo meditsinskogo instituta imeni Pavlova.

Kulakov, V. I.

1120* Electroconductivity of Bismuth Oxide. Ob elektroprovodnosti okisi vismuta. (Russian.) V. M. Konovalov, V. I. Kulakov, and A. K. Fidrin. *Zhurnal tekhnicheskoi fiziki*, v. 25, no. 11, Oct. 1955, p. 1864-1867.

Relation between temperature and specific conductivity; temperature-conductivity curves before and after extended reductive action in CO atmosphere; photoelectric conductivity. Graphs. 3 ref.

Kulakov V.I.

137-1958-2-2689

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 70 (USSR)

AUTHOR: Kulakov, V.I.

TITLE: Circular Cracks in Hollow Ingots of the Alloy D 1 (an Aircraft Duralumin) (Krugovyye treshchiny v polykh slitkakh splava D 1)

PERIODICAL: V sb.: Metallurg. osnovy lit'ya legkikh splavov. Moscow, Oborongiz, 1957, pp 192-196

ABSTRACT: In the continuous casting of hollow ingots of the alloy D 1 (an aircraft Duralumin) circular cracks may develop if the level of the water applied to the inner surface is higher than that applied to the outer surface. The cracks tend to develop where the metal enters the crystallizer. They may be eliminated by equalizing the water levels. Circular cracks form during the casting process and, by their very nature, are hot. The heightened sensitivity of individual heats of alloy D 1 to hot cracking contributes to their formation.

G.S.

1. Alloys Ingots--Fracture

Card 1/1

KULAKOV, V. I.

"Homogenization of Ingots of D-16 Alloy at Elevated Temperatures"

Light Alloys. no. 1: Physical Metallurgy, Heat Treatment, Casting, and Forming; Principal Reports of the Conference, Moscow, Izd-vo AN SSSR, 1958, 497 P.
(2nd. All. Conf on Light Alloys 1955)

SOV/137-58-12-24485

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 75 (USSR)

AUTHOR: Kulakov, V. I.

TITLE: Homogenation of D16 Alloy Billets at Elevated Temperatures (Gomogenizatsiya slitkov splava D16 pri povyshennykh temperaturakh)

PERIODICAL: V sb.: Legkiye splavy. Nr 1. Moscow, 1958, pp 240-244

ABSTRACT: A presentation is made of the results of the introduction of a process of high-temperature homogenation in the serial production of thin-walled hot-pressed D16 alloy shapes (S). It is noted that homogenation of the billets at 490°C permits production of S of high σ_b and low δ. A rise of 20-30° in temperature increases the rate of S extrusion and does not cause burn. Complete recrystallization occurs in S of this type in the process of heating for the purpose of hardening. As a result there is an increase in δ, and uniform S structure and stability of mechanical properties is achieved.

L. P.

Card 1/1

S/123/62/000/013/007/021
A004/A101

AUTHORS: Fridlyander, I. N., Zakharov, Ye. D., Kulakov, V. I.

TITLE: Using cold working to increase the strength of the AK4 -1 (AKCh-1) alloy

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1962, 28, abstract 13B171 (In collection: "Deformiruyemyye alyumin. splavy". Oborongiz, 1961, 116 - 123)

TEXT: The authors investigated the effect of cold deformation on the aging kinetics of the AKCh-1 aluminum alloy, having a composition of (in %): 2.11 Cu, 1.83 Mg, 1.21 Ni, 1.36 Fe, 0.082 Ti, the rest being Al, using specimens which, after the casting, were subjected to diffusion annealing at 520°C for 24 hours. Then the ingots were pressed, rolled at 350 - 400°C into strips of 6 mm thickness and were then subjected to hardening with subsequent natural ageing in the course of 30 days or rolling immediately after hardening with a degree of deformation of 10 and 20%. After cold working, the specimens were subjected to artificial ageing at 20, 170, 180, 190, 200 and 210°C. It was found that cold working con-

Card 1/2

Using cold working to...

siderably cuts the holding time of the AKCh-1 alloy, which is necessary to obtain the maximum hardness. The maximum mechanical properties are obtained for the non-coldhardened alloy after ageing at 185°C in the course of 48 hours, while this is attained with cold worked specimens after 6 - 10 hours ageing at the same temperature. By cold working in the freshly hardened state it is possible to increase the strength of die-forgings from the AKCh-1 alloy by 5 - 7 kg/mm^2 at room temperature and by 4 - 5 kg/mm^2 at 175°C. In this case σ_b may attain 42 - 43 kg/mm^2 during short-time tests. Holding for 100 hours at 175°C causes the strength of cold-worked specimens to decrease to magnitudes which were attained with this alloy without cold deformation after hardening (down to 34 - 40 kg/mm^2). It is recommended to use cold working for parts of not too intricate shape with smooth transitions. For parts operating at temperatures near 175°C it is not recommended to use cold working for protracted periods. There are 5 figures.

E. Spivak

[Abstracter's note: Complete translation]

S/123/62/000/014/008/020
A004/A101

AUTHORS: Isayev, V. I., Ivankin, I. A., Kulakov, V. I., Loktionova, N. A.

TITLE: The special features of the heat treatment of solid dies from the Д 1 (D1) alloy

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 14, 1962, 28, abstract 14B158 (In collection: "Deformiruyemyye alyumin. splavy". Moscow, Oborongiz, 1961, 131 - 136)

TEXT: It was found that the main reasons for the origination of cracks in hardened solid dies made of the D1 aluminum alloy under large-scale production conditions are increased residual stresses arising during the hardening, particularly in those places where thin cross sections go over into thick ones, the increase of the hardening temperature, and the use of abrupt cooling aids (water of 20°C). A strict observation of the heat-treatment conditions, hardening at 495 + 5°C, the use of hot water (80°C) for cooling or a gradual hardening with cooling in molten salts at 145 - 155°C made it possible to cut down die rejects because of cracks to 0.2%. There are 2 figures.

V. Stasevich

[Abstracter's note: Complete translation]

Card 1/1

LOKTIONOVA, N.A.; KULAKOV, V.I.; KRIVENKO, R.A.; TEYTEL', I.L.

Reducing residual stresses in aluminum alloy ingots. Metalloved. i term. obr. met. no.11:46-47 N '63. (MIRA 16:11)

ACCESSION NR: AP4021562 S/0136/64/000/003/0067/0069

AUTHOR: Kulakov, V. I.

TITLE: Variation of Continuous Casting of Deformable Aluminum Alloys

SOURCE: Tsvetny*ye metally*, no. 3, 1964, 67-69

TOPIC TAGS: inversion cast ingot, horizontally cast ingot, aluminum, duraluminum foundry installation, inoculation

ABSTRACT: The author investigated the effect of the design of the foundry installation on the quality of ingots cast by inversion and horizontal methods. Inversion casting produces ingots with stable qualities while horizontal casting is better suited for small diameter ingots having the following advantages: (1) increased yield of metal as a result of the arrangement of crystallization basins along the mixer front; (2) elimination of surface defects; (3) decreased formation of oxide films; (4) possibility of combining the processes of casting, cutting to the desired size and mechanizing, storing and transportation of billets. In-

Card 1/4

ACCESSION NR: AP4021562

verse casting was conducted by means of a special cylindrical furnace with a graphite crucible holding 120 kg aluminum and a casting installation (see fig. 1 of enclosure). Heat treated specimens had mechanical properties approaching those of continuously cast ingots. There was no porosity and the grains were equiaxial and fine. Small surface segregates were attributed to the effect of metallostatic pressure or secondary heating of the skin. Duraluminum was used as an inoculant in horizontal casting. Casting temperatures, structure and quality of commercial aluminum ingots with a 100 mm diameter cast at 13.5m/hr were studied. The distributing box was preheated to 650-700C. The box was sealed with an asbesto plug and filled with metal fed from the mixer until it exceeded the crystallization basin level slightly. Then the plug was removed so that the metal filled the crystallization basin to the level of inoculation. Within 2-3 seconds the ingot stripper mechanism was switched on. For 100 mm diameter ingots, an 80 mm high crystallization basin proved most suitable. The recommended angle of the water supply lies within the 20 degree to 30 degree range. A continuous lubrication system and better lubricants are still to be developed. The author found that the grain size which is largely affected by

Card 2/4

ACCESSION NR: AP4021562

metal temperature fed to the crystallization basin exceeds that of ordinary continuously cast specimens. Orig. art. has: 2 figures

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 08Apr64 ENCL: 01

SUB CODE: MM NO REF SOV: 001 OTHER: 000

Card 3/4

ACCESSION NR: AP4021562 ENCLOSURE: 01

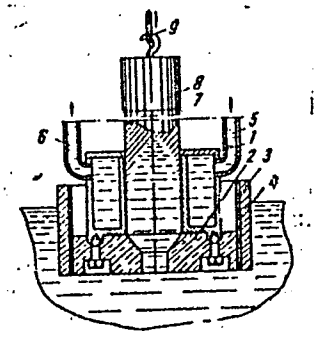


fig. 1

Crystallizer basin and inversion casting diagram: (1) crystallizer basin (2) ceramics; (3) metal ring; (4) refractory material; (5) water outlet; (6) water supply (7) ingot being cast; (8) seed (9) connecting rope between seed and withdrawal mechanism

Card 4/4

KULAKOV, V.I.

Hot cracking of AB and AMg alloys depending on their chemical composition. Alium. splavy no.3:363-370 '64.
(MIRA 17:6)

KULAKOV, V.I.; POLYANSKIY, A.V.; SUSHKOV, A.I.; TSYKALO, S.B.

Quality of flat commercial aluminum ingots cast from molten electrolytic baths. Alium. splavy no.3:390-396 '64. (MIRA 17:6)

L 23441-65 EWT(m)/EWP(w)/EWA(d)/EPR/T/EWP(t)/EWP(b) Ps-4 IJP(c) JD

ACCESSION NR: AP4043912 S/0136/64/000/008/0075/0078

AUTHOR: Kulakov, V. I.; Bazhenov, M. F.; Matveyev, A. I.

TITLE: The utilization of secondary aluminum for the production of deformed semifinished products

SOURCE: Tsvetnyye metally, no. 8, 1964, 75-78

TOPIC TAGS: aluminum, copper, magnesium, iron, Duralumin, corrosive strength, surface property

ABSTRACT: In view of the high cost of Al alloy products the authors investigated the possibility of producing an Al-Cu-Mg alloy. The chemical composition of [illegible]min served as the basis for research. Ingots, [illegible] in diam. were pressed [illegible] into 10 x 70 mm strip. Mechanical tests of the [illegible] treated specimens produced satisfactory results with 0.3% Mg and Mn contents. Hot brittleness tests showed the need for limiting the Fe contents to 0.8-0.9%. The chemical composition of the new "VD-1" alloy (in %) is: 2.6 to 3.6 Cu; 0.5 to 1.0 Mg, 0.3 to [illegible] Mn; 0.9 Fe; 0.4 to 1.0 Si; 0.4 Zn; 0.15 Ti; 0.1 impurities. Pilot plant tests proved the casting properties of "VD-1" specimens were equal to those of "D1"

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L 23442-65

ACCESSION NR: AP4043912

specimens. "VD-1" pipes, 40 to 16 mm in diam. and having a 1 to 2 mm wall thickness showed a corrosive strength that was superior to that of D1 specimens after holding in sea water for 30 days. Bend tests at 180C gave good results. Heated peened pipes were bent at any desired angle without damage and the expanding of annealed pipes produced no cracks. Surface quality of "VD-1" specimens was also superior. Thus, mechanical properties of the "VD-1" alloy are equal to the "D1" alloy while corrosive strength is higher. The authors expect a saving of 15 kg Cu per ton of pipes and profiles and a 30% increase in the use of secondary Al in the charge as a result of decreasing primary Al. The production of secondary Duralumin type Al would double. Orig. art. has: 4 tables and 2 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 004 OTHER: 001

Card 2/2

L 31107-65 EWT(m)/EPR/T/EWP(t)/EWP(b) Ps-4 IJP(c) JD

ACCESSION NR: AP5002939 S/0129/65/000/001/0009/0011

AUTHOR: Laktionova, N.A.; Kulakov, V.I.; Krivenko, R.A.; Teytel', I.L.

Residual stresses in large, quenched, aluminum alloy billets

Metallovedeniye i termicheskaya obrabotka metallov, No. 1, 1965, 9-11

TOPIC TAGS: residual stress, aluminum quenching, aluminum billet, aluminum alloy/ aluminum D16

ABSTRACT: The purpose of the work was to devise procedures for the thermal treatment of large aluminum parts leaving the least residual stress but maintaining high mechanical properties. Large cylindrical billets prepared by continuous casting (diam. 280 mm) were cut into lengths of 500 mm. One portion was bored out in the center (diam. 70 mm), the other portion left solid. The residual stress was measured, then the billets were subjected to various heat treatments and the residual stress measured again according to N. N. Davidenkov method (not explained). In addition, the mechanical properties

[illegible] quenched, large-size billets [illegible] aluminum

[illegible]

[illegible] the sampling and the constricting stress over the cross section

L 1053-66 EWT(m)/EWP(w)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) IJP(c) MJW/JD/HW

ACCESSION NR: AP5022380 UR/0136/65/000/009/0071/0075 49 47 B
669.715-15

AUTHOR: Kulakov, V. I.; Bazhenov, M. F.; Kokovina, A. S.
44,55 44,55 44,55

TITLE: Effect of heat treatment on the properties of sheets of the aluminum alloy VD1
4 A A A 44,55,27

SOURCE: Tsvetnyye metally, no. 9, 1965, 71-75

TOPIC TAGS: metal heat treatment, aluminum alloy, corrosion resistance, metal hardening, metal aging/ VD1 aluminum alloy
1

ABSTRACT: The use of the secondary aluminum alloy VD1 in structural and machine elements requiring the combination of high strength with corrosion resistance has led to the need to investigate the effect of heat treatment on these properties. Hence, the authors present the results of their studies of the regimes of heat treatment of VD1 alloy sheets assuring the optimal physical properties and corrosion resistance. This was based mainly on raising the hardening temperature in a combination with natural and artificial aging. 2,000 specimens taken from 1.0, 1.5, 2.0, and 6.5 mm thick sheets of VD1 alloy(from a melt containing 2.94%

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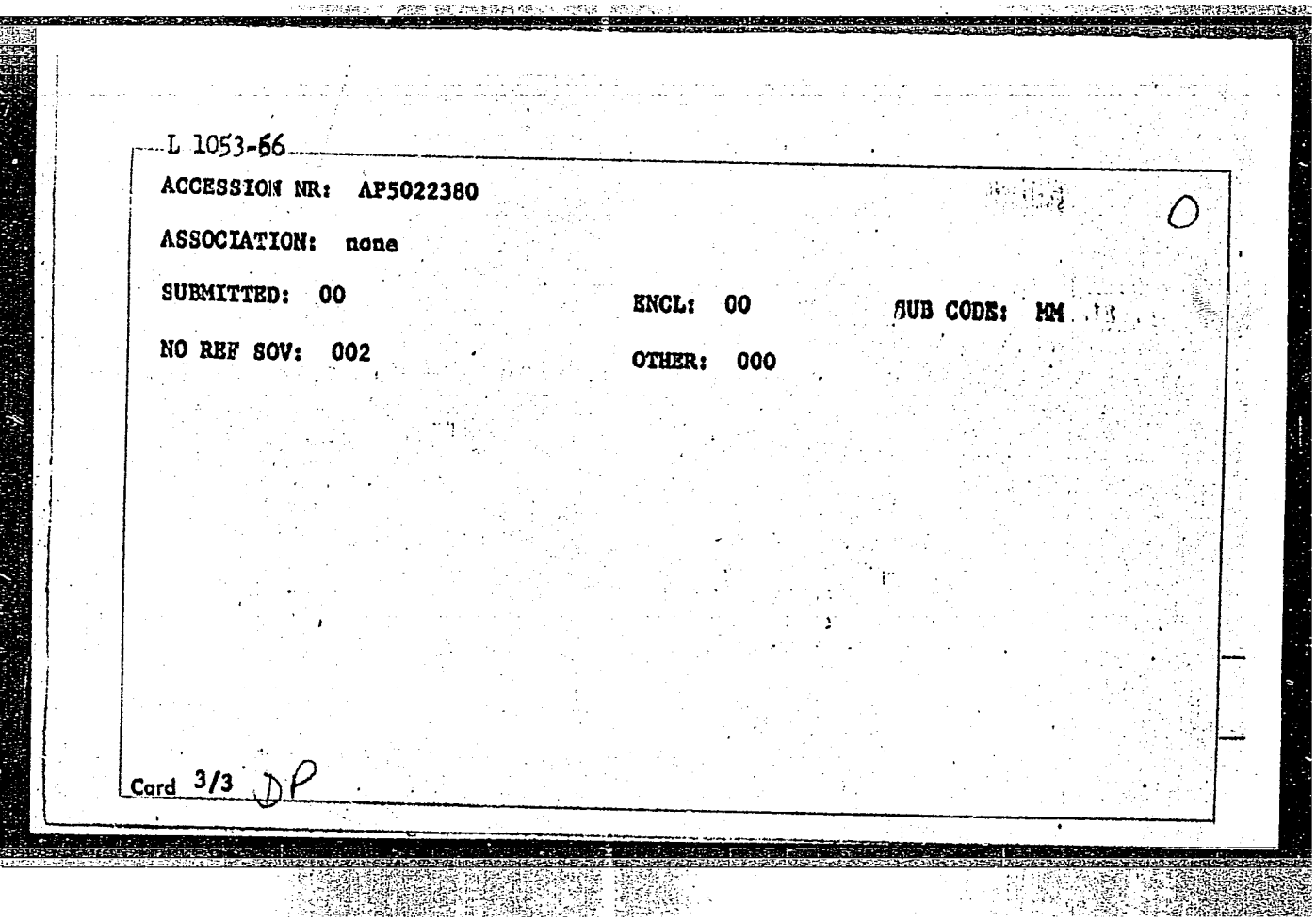
L 1053-66

ACCESSION NR: AP5022380

Cu, 0.71% Mg, 0.58% Mn, 0.42% Fe, 0.74% Si, 0.20% Zn) were hardened at temperatures of from 485°C to 535°C. It was found that hardening at 535°C leads to some increase in ultimate strength σ_u (41.1 kg/mm^2) and yield strength σ_y (25.5 kg/mm^2) compared with hardening at 485°C (σ_u = 36.9 kg/mm^2, σ_y = 20.0 kg/mm^2); hardening at temperatures beyong 495°C leads to a marked increase in strength properties without any appreciable decrease in plasticity. The optimal temperature and duration of artificial aging are 160°C and 10 hr, respectively. The pattern of increase in strength properties with hardening temperature is the same whatever the thickness of the sheets investigated. Microstructural examination revealed no burnouts over the range of hardening temperatures investigated. Corrosion resistance was determined by testing hardened (at 485, 505, 515, 525, and 535°C) and aged specimens of VD1 sheets for intercrystalline corrosion and stress corrosion as well as for loss of mechanical properties following corrosion tests. Finding: raising the hardening temperature above 505°C favorably affects the improvement in corrosion resistance (the depth of corrosion foci was 0.33 mm at 505°C against 0.18 mm at 535°C). Thus, raising the hardening temperatures of the alloy markedly improves its strength and corrosion properties and warrants recommending it for use instead of the alloy D16 in structural elements and products performing under normal temperature conditions and in the absence of high fatigue stresses. Orig. art. has: 4 figures, 4 tables.

Card 2/3



L 1053-66

ACCESSION NR: AP5022380

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 002 OTHER: 000

Card 3/3 DP

L 4175-66 EWT(m)/EPF(c)/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/HW/NB

ACC NR: AP5024406 SOURCE CODE: UR/0286/65/000/015/0083/0084

INVENTOR: Kulakov, V. I.; Matveyev, A. I.; Istrin, M. A.; Murzov, A. I.; Fridlyander, I. N.; Bazhenov, M. F.; Belyanskiy, A. A.; Anan'in, S. N.

ORG: none

TITLE: Wrought, aluminum-base alloy. Class 40, No. 173419

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 83-84

TOPIC TAGS: alloy, aluminum base alloy, copper containing alloy, magnesium containing alloy, silicon containing alloy, zinc containing alloy, manganese containing alloy, iron containing alloy, nickel containing alloy, titanium containing alloy, chromium containing alloy, zirconium containing alloy, beryllium containing alloy

ABSTRACT: This Author Certificate introduces a wrought, aluminum-base alloy with high mechanical properties, corrosion resistance, and workability. The alloy contains 1.8—3% copper, 1.2—2% magnesium, 1.0—1.8% silicon, 3.5—6.0% zinc, 0.1—0.6% manganese, 0.9% max iron, 0.1% max nickel, 0.01—0.2% titanium, 0.05—0.2% chromium, 0.01—0.1% zirconium, and 0.0001—0.001% beryllium. [AZ]

SUB CODE: MM/ SUBM DATE: 27Jan64/ ORIG REF: 000/ OTH REF: 000/ ATD PRESS: 4127

Card 1/1

UDC: 669.715.018.8

L 37171-66 EWT(m)/EWP(t)/ETI LJP(c) MJW/JD/GD/JH

ACC NR: AT6016416 (A) SOURCE CODE: UR/0000/65/000/000/0102/0108

AUTHOR: Kulakov, V. I.

ORG: none

TITLE: Secondary aluminum alloys for the manufacture of deformed semifinished products

SOURCE: AN SSSR. Institut metallurgii. Metallovedeniye legkikh splavov (Metallography of light alloys). Moscow, Izd-vo Nauka, 1965, 102-108

TOPIC TAGS: aluminum alloy, magnesium containing alloy, copper containing alloy / AKM1 aluminum alloy, VD1 aluminum alloy

ABSTRACT: The properties of the new alloys VD1 and AKM1 were studied as a function of composition and temperature of aging. The study was prompted by the need to use secondary aluminum alloys, i.e., aluminum scrap and waste, in the production of aluminum alloys. The experimental results are shown in graphs and tables (see Fig. 1). Microstructure photographs of the new alloys are also presented. It was found that the optimum composition of alloy VD1 was: Cu 2.6—3.6%, Mg 0.5—1.0%, Mn 0.3—0.7%, Fe up to 0.9%, Si 0.4—1.0%, Ni up to 0.2%, and Zn up to 0.5%, and that of alloy AKM1 was: Cu 0—1.5%, Mg 0.2—1.5%, Mn 0.2—1.0%, Fe up to 0.7%, Si 0.3—1.8%, Ni up to 0.1%, and Zn up to 0.3%. Both alloys are recommended as suitable materials for the manufacture of aluminum alloy semifinished products. It is estimated that

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L 37171-66

ACC NR: AT6016416

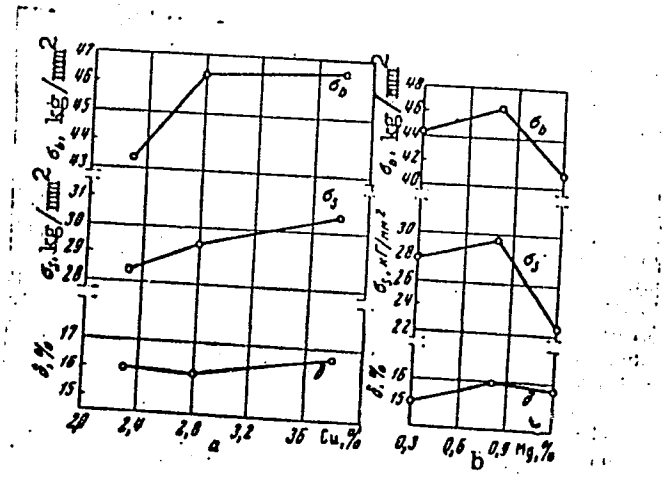

Fig. 1. Mechanical properties of alloy VD1 as a function of the copper (a) and magnesium (b) content.

the use of secondary aluminum compared to primary aluminum in the production of both alloys VD1 and AKM1 reduces the cost of aluminum alloy semifinished products production by 15--20%. Orig. art. has: 4 tables and 4 figures.

SUB CODE: 11/ SUBM DATE: 16Sep65/ ORIG REF: 010/ OTH REF: 001

Card 2/2 af

L 46278-66 EWT(m)/T/EWP(t)/ETI IJP(c) JH/JD/WB

ACC NR: AT6024950 (A,N) SOURCE CODE: UR/2981/66/000/004/0341/0349

AUTHOR: Loktionova, N. A.; Kulakov, V. I.; Isayev, V. I.

ORG: none

TITLE: Heat treatment of products of AK6 aluminum alloy in hot media

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 341-349

TOPIC TAGS: metal heat treatment, aluminum alloy property

ABSTRACT: A study of the mechanical, corrosion and microstructural properties of pressed billets and stampings of AK6 alloy showed that in quenching in hot media, despite a marked decrease in cooling rate as compared to ordinary quenching in water at 20°C, a supersaturated α solid solution appears which is capable of hardening during aging and isothermal holding in a salt melt at the temperature of artificial aging. Industrial tests showed that stepwise and isothermal quenching schedules can be used only for stampings with a cross-sectional thickness of no more than 15 mm. Quenching in hot water at 90°C can be used for stampings with a cross-sectional thickness up to 50 mm without any appreciable decrease in properties. The observed slight decrease in properties during quenching in hot media is due to the predominant breakdown of the solid solution along the grain boundaries. For this reason, articles with a finely granular structure and a well-developed substructure are more sensitive to changes in

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L 46778-66

ACC NR: AT6024950

the cooling rate than articles with a coarse-grained recrystallized structure. The general corrosion and stress corrosion after quenching in hot media are practically the same as after ordinary quenching followed by artificial aging. Orig. art. has: 4 figures and 1 table.

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

Card 2/2

L 30725-67 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/JH

ACC NR: AP6029675 (N) SOURCE CODE: UR/0136/66/000/008/0086/0088

AUTHORS: Kulakov, V. I.; Bazhenov, M. F.; Tsabrov, N. D.

ORG: none

TITLE: Mechanical and corrosion properties of sheets of alloy VD3

SOURCE: Tsvetnyye metally, no. 8, 1966, 86-88

TOPIC TAGS: alloy, ~~aluminum alloy~~ property, aluminum alloy, ~~production, aluminum~~ manganese alloy / VD3 alloy, VD1 alloy, D16 alloy

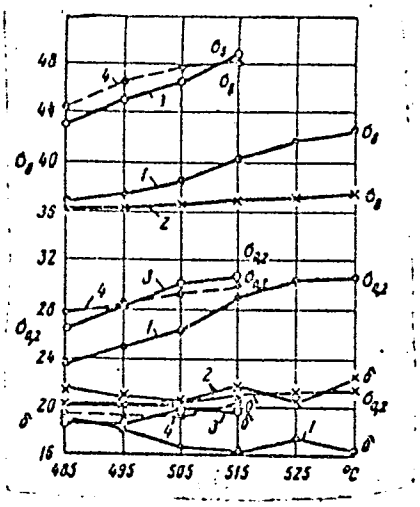
ABSTRACT: The mechanical and corrosion properties of sheets made from alloy VD3 were investigated, and the experimental results were compared with the corresponding results obtained for alloy D16. The investigation supplements the results presented by V. I. Kulakov, M. F. Bazhenov, and A. S. Kokovina (Tsvetnyye metally, 1965, No. 9). The experimental results are presented in graphs and tables (see Fig. 1). It was found that the corrosion and mechanical properties of alloy VD3 are comparable to those of alloy D16, and it is suggested that a combination of alloys VD1 and VD3 should yield an alloy suitable for use in metallurgic and machine building plants.

Card 1/2 UDC: 669.71-41:620.193

L 10685-67

ACC NR: AP6029675

Fig. 1. Dependence of the mechanical properties of sheets made from alloy VD3 (1,2) and alloy D16 (3,4) on the quenching temperature: 1,3 - artificial aging; 2, 4 - natural aging



Orig. art. has: 2 tables and 1 graph.

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

Card 2/2

ACC NR: AT6036424 (A) SOURCE CODE: UR/2536/66/000/066/0147/0156

AUTHOR: Kirpichnikov, K. S. (Candidate of technical sciences); Kulakov, V. I. (Engineer); Shchekina, M. T. (Engineer)

ORG: none

TITLE: The effect of microalloying with refractory elements on the structure and properties of aluminum-alloy sheets containing 5% Zn and 2% Mg

SOURCE: Moscow. Aviatsionnyy tekhnologicheskiy institut. Trudy, no. 66, 1966, Struktura i svoystva aviatsionnykh staley i splavov (Structure and properties of aircraft steels and alloys), 147-156

TOPIC TAGS: alloy mechanical property, microalloying, aluminum zinc magnesium alloy, zirconium containing alloy, titanium containing alloy, beryllium containing alloy, chromium containing alloy, manganese containing alloy

ABSTRACT: A series of Al-Zn-Mg alloy ingots microalloyed with various amounts of zirconium, titanium, beryllium, chromium and manganese were homogenized at 450—470C for 12 hr and extruded into slabs (100 x 8 mm) which were rolled into sheets 1 and 3 mm thick, Sheet specimens 30 mm wide and 180 mm long cut along the direction of rolling were solution annealed at 430—435C, water quenched, and then aged. The optimal aging conditions giving the highest yield strength with sufficient elongation and high corrosion resistance was found to be 100C for 6 hr + 180 C for 4 hr. The

Card 1/2 UDC: 669.017:669.71