CIA-RDP86-00513R000824020017-7



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A.T.

BOMAROV,

CIA-RDP86-00513R000824020017-7

137-58-3-6166 Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 245 (USSR) AUTHORS: Terminasov, Yu.S., Komarov, A.I. TITLE: X-ray Diffraction Studies of Surface Layers of Metals Subjected to Dry Friction (Rentgenograficheskoye issledovaniye poverkhnostnykh sloyev metallov pri sukhom trenii) PERIODICAL: Uch. zap. Leningrad. gos. ped. in-t im. A.I.Gertsena, 1957, Nr 140, pp 58-59 ABSTRACT: X-ray diffraction methods, employing an Al standard and photographic reversal in conjunction with Co-K& irradiation, were employed in order to determine residual stresses of classes II and III in brass and 45-type steel. Specimens were subjected to dry friction under various pressures and at different velocities on a special machine. Distribution of the residual stresses was studied by means of subjecting successive layers of metal to electrolytic etching. It is established that residual stresses of classes II and III, due to friction, increase with increasing pressures up to a certain magnitude which is determined by the velocity of friction. Any further increase in pressure may reduce Card 1/2the extent of lattice distortion, i.e., produce a weakening of the

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137-58-3-6166 X-ray Diffraction Studies of Surface Layers of Metals (cont.) surface. The velocity of friction affects both the depth and the extent of cold hardening, and the cold hardening, in turn, influences wear-resistant proper-A.F. Card 2/2

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Experiments in the manufacture of viscose pulp. As the Kommune Burnauk. Prom. 24, No. 1, 21-6(1949)....A. Sow sheet is presented for the manuf. of viscose pulp wherein raw stock with 45-55 Bjorkman hardness, a viscosity of 270-300 millipoises, a dirt count of not more than 2500 speechs per sq.m., and an uncooked content of not more than 3% is produced by cooking chips having a moisture content of 32-40% with acid contg. 3.7-4.5% total SO of which 39-76% is free SO to 16-20 hrs. to a final temp. of 142-47°. Raw stock at 25-3.0% consistency is passed to a chlorinating tower of 150 ca.m. capacity where it is treated with 3% of Cl based on the fiber. The pulp, now with a lardness of 12-18, is treated with alkali, passed over a pressure filter, washed again and then concel. on a vacuum filter to 10-12% consistency.

It is then mixed with NaOlf and heated to 90-5° in a spiral mixer, whence it enters the top of the refining tower of 165 cu.m. capacity. The product from the bottom of the refining tower is washed and dik. to 5-6° consistency and 0.005 to 0.02°, alky, whence it is treated with hypothorite where it passes up through 1 tower and fowm through another, each of 100 cum. capacity. Contact time is both towers is 3-4 hrs. Cl consumption in these towers is 30°, of the total consumed. The product from the towers as a Bjorkman hardness of 4.9°, a diff count of 1500-2000 specks per sq.m., a viscosity not leas than 160 millipolses, an alky. of 0.004% and is passed to the bacters at a piff of 3.0-5.5 hrs. hypothlorite consumption amounting to 0.8-1.5% of the fiber. Washing in the beater for 1-2 hrs. is followed by acid treatment for 0.5 hr, and a mantion in kg./ton of air-dry cellulose is 23-35 in the chorinating tower, 18-25 in hypothorite biesching, and 4-12% in the beater. The final presed viscos pulp product has a dirt count of 205 to 490, a moisture contention of 205 to 490, a moisture content of 0.12% in the beaters. The final presed viscos pulp product has a dirt count of 205 to 490, a moisture content of 0.22 to 0.25%.

an a-cellulose content of 91.0-91.8%, resin content of 0.46-0.70%, and a lignin content of 0.70-0.76%. Marshall Sittig

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S/146/62/005/003/010/014 D201/D308 AUTHOR: Komarov, A.I. The use of spectrum transformation in determining TITLE: the correlation functions of low frequency random pròcesses PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 3, 1962, 82-90 TEXT: The author discusses the problem of determining errors of operation of a certain type of correlator. The analysis of errors is carried out using the properties of the random process and of separate sections of the instrument. It is assumed that the random process obeys the normal distribution law, that its mathematical expectation is zero and that the spectral density of the process is uniform within a certain frequency range. It is shown that the relative error in determining points of the correlation function decreases with the increase of the spectrum width of the random process. The spectrum transformation may be obtained with the delay Card 1/2

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S/146/62/005/003/010/014 The use of spectrum transformation ... D201/D308 circuit of the correlator employing magnetic tape recording and using various speeds in the recording and reproduction. Design formulae for basic correlator element circuits are given. These formulae have been used by the author for the design of a correlator having the following characteristics: 1) Recorder amplifier. Frequency response linear within 1-300 c/s; 2) Delay circuit. Double channel recording, with delay varying in time by relative position shifting of recording heads; 3) The recording amplifier frequency compensated to 40-12,000 c/s; 4) Averaging circuit. Self-recorder with $\frac{\omega_0}{2\pi} \approx 3$ c/s. This instrument was used to determine the correlation curves of sinusoidal functions, from 1 to 200 c/s. The accuracy obtained was 5-6%. due mostly to the poor quality of the tape winding mechanism. Theoretically the correlator using spectrum transformation gives a much greater degree of accuracy. There are 2 figures and 1 table. ASSOCIATION: Kuybyshevskiy industrial'nyy institut im. V.V. Kuybysheva (Kuybyshev Industrial Institute im. V.V. Kuybyshev) SUBMITTED: June 23, 1961 Card 2/2

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KOMAROV, A.I.

Using spectrum transformation in determining the correlation functions of random processes lying in the range of low frequencies. Izv.vys.ucheb.zav.; prib. 5 no.3:82-90 162. (MIRA 15:8)

1. Kuybyshevskiy industrial'nyy institut imeni V.V.Kuybysheva. Rekomendovana kafedroy izmeritel'noy tekhniki. (Analog computers)

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ACCESSION NR: AR4039360		S/0272/61:/000/003,	100/15/00/15	
SOURCE: Ref. Zh. Metrol.	i izmerit. tekhn. Otd.			
AUTHOR: Komarov, A. I. TITLE: Digital indicator	for measuring small ve	locitias		
CITED SOURCE: Nauchn. tr TOPIC TAGS: velocity, me	•	p. 1, 1963, 69-77		
TRANSLATION: Device empli- help of which it is possi- described. Performance of 1 to 30 ^m /hr, with accuracy ment of arbitrarily small appraised.	ble to determine magnitu f the apparatus is evalu y to 0.12/hr. but practi	ide and direction of v lated in measuring vel loally may be edapted	elocity, is' ocities from	
DATE ACQ: 22Aprol	SUB CODE: ES	ENCL: (0	
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C NRI AR6032059	SOURCE CODE: UR/0271/66/000/007/B008/B008	- - -
UTHOR: Komarov,	A. I.	
'ITLE: Attachment to andom processes	o the "Ural-1" digital computer for analysis of low-frequency	/
OURCE: Ref. zh. Av B58	vtomatika, telemekhanika i vychisliteľnaya tekhnika, Abs.	
EF SOURCE: Nauch	n. tr. vuzov Povolzh'ya, vyp. 2, 1965, 353-367	
OPIC TAGS: digital igital computer attack	computer, low frequency, random process, attachment, hment	
omputer is presented omputer and makes it ecorded on 35 mm pe ith uniform and nonur equency range and re	mance evaluation of an attachment to the "Ural-1" digital The attachment operates on individual blocks of the t possible to feed in the curve ordinates in binary form, 160 erforated tape. An investigation is made of random processes inform spectral density which changes linearly in some eaches a maximum at the terminal point of this range. The of random processes are determined by this attachment. The	
d 1/2	UDC: 681, 142, 32, 001	
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<u>L 20995-66</u> EWT(m) CCESSION NR: AP5019038		
	UR/0286/65/000/012/0069/0069 69.057.528	
UTHOR: Vorob'yev, A. I.	; Ivanovskiv. G. V.; Komarov. A. K.; Tsikhona, V. A.; B	지 않는 영국의
andomirskiy, G. B.; Rubin	nshteyn, G. V.	
ITLE: A device for prepa	aring concrete forms. Class 37, Ko. 172020	
DURCE: Byulleten' izobre	eteniy i tovarnykh znakov, no. 12, 1965, 69	
OPIC TAGS: concrete stru	ucture, concrete, structural concrete, construction method	
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rus. The device is used	Certificate introduces a device for preparing concrete	
into a monolithic unit.	a when the blocks which make up a structure are being join-	
into a monolithic unit. d a clamping attachment. amping attachment in the	A when the blocks which make up a structure are being join- The apparatus includes a panel which covers the joint, Assembly and disassembly are simplified by making the form of a support and anomatic takes.	
into a monolithic unit, and a clamping attachment, amping attachment in the cated between the support	A when the blocks which make up a structure are being join- The apparatus includes a panel which covers the joint. Assembly and disassembly are simplified by making the form of a support and pneumatic tubes. The tubes are of and the panel and are down fourther by the second	
amping attachment in the cated between the support tup, the free ends of the	A when the blocks which make up a structure are being join- The apparatus includes a panel which covers the joint, Assembly and disassembly are simplified by making the form of a support and pneumatic tubes. The tubes are of and the panel and are drawn together by rods. During	
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XOMAROV,A.M. HIRZOTEVA, Yo.L.: KOMAROV, A.M.: PODEOPAYEV, I.I.: HITCHENEO, K.D. Regularizing the wage system in the baking industry: discussion on the article of R.IA. Vorovitekaia, G.I. Kleiman. Enleb.: kond.prom. 1 no.6:24-29 Je '57. (MIEA 10:8) I.Ministerstvo promyshlennosti prodovol'stvennykh tovarov SSSR (for Mirzoyeva). 2.TSentral'nyy konitet pro: source rabochikh pishchevoy promyshlennosti (for Konarov). 3. Tekhnik po trudu Podol'skogo khlebokombinata Moskovskoy oblasti (for Mitchenko). (Wages)

APPROVED FOR RELEASE: 06/13/2000

AND DESCRIPTION DESCRIPTION DESCRIPTION SELIVERSTOVA, H.I., KOMAROV, A.M., SPEYT, Yu.A.

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CIA-RDP86-00513R000824020017-7"

Ina iron ore deposit in the Altai. Sov. geol. 3 no.7:121-122 J1 '60, (MIRA 13:8) 1. Inskaya geclogorazvedochnaya partiya. (Ina Valley--Iron ores)

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KOMARÔV,	A. M.				161710	
			USSR/Electricity - Power, Electric Jan 5 (Contd) Describes Orgres experiments in reconstructing 37 blowers and exhaust fans, showing recon- structed machines were as efficient, if not more so, than new models.	Ency of new types Trust centrifugal Trust for Orgn of ons), selection of ers and exhaust fa savings effected b	ng the Savings Effected i tallations," A. M. Komarc , Stalin Prize Laureates, nts" No 1	USSR/Electricity - Power, Electric Fans, Centrifugal
		161710	Jan 50 nstructing if not	r central Regional type and di- type and di- uns for given y them. 161110	Forced-	J M S

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Comarov, A.M. Increasing the Efficiency of Forcei-Draf Povysheniye ekonomichnosti tyagodut'yev	123 - 1 - 217
ncreasing the Efficiency of Forced-Draf Povysheniye ekonomichnosti tyagodut ivey	t Installations
The second s	ykh ustanovok).
r. nauchtekhn. soveshchaniya po usove posobov pyleszhiganiya antratsitov 1 to 1L., Gosenergoizdat, 1955, 146-156.	mala an information of the
he operative efficiency of forced-draft s analyzed. The necessity for reconstr f them is noted. Formulae and method o y Similiarity" for determination of nee ize of reconstructed ventilator are give rete layouts for reconstruction of exha- rovided. N.I.M.	uction of many f "Recounting ded type and
ef. Zh., Mashinostroyeniye, Nr.l, 1957,	Item 217.
	he operative efficiency of forced-draft s analyzed. The necessity for reconstr f them is noted. Formulae and method o y Similiarity" for determination of nee- ize of reconstructed ventilator are giv- rete layouts for reconstruction of exha- rovided. N.I.M.

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CALENDER DECEMBER DECEMBER DECEMBER DE

AUTHOR: Komarov, A.M. and Kuznetsov, N.I., Engineers and Nevel'son, M.I., Candidate of Technical Sciences.

TITIE: The experience of ORGRES in the reconstruction of draught producing machinery. (Opyt raboty ORGRES po rekonstruktsii tyagodutevykh mashin)

PERIODICAL: "Elektricheskie Stantsii" (Power Stations), 1957, Vol. 28, No.4, pp. 23 - 26 (U.S.S.R.)

ABSTRACT: An article by Kuptsov in "Elektricheskie Stantsii, No. 7, 1956, severily criticised recent new types of draught fans, in which the blades are bent backwards, which were stated to be of poor characteristics. Kuptsov stated that the advantages of reconstruction of the draught producing equipment resulted not from higher efficiency of the markines but from selecting a machine suitable for the gas duct and by adjustments to the gas duct. A lot of money had been wasted on reconstruction of draught producing equipment in power stations.

This article is a reply to Kuptsov and controverts all his criticisms which are said to be in contradiction to experimental data quoted in the article. Figures are then given for the comparative efficiencies of the old and new types of machines. The results of reconstruction are

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The experience of ORGRES in the reconstruction of draught producing machinery. (Cont.) 104-4-7/40

analysed and it is stated that, of course, the characteristics of the gas duct had been improved and that over the last ten years more than 500 induced draught fans and ventilators have been reconstructed with good effect. There have been a few cases in which the design characteristics were not achieved mainly because of defects of manufacture, which were sometimes unavoidable when the equipment was made in power station repair workshops, but these few cases do not discredit the general procedure of reconstruction.

The cost of reconstruction and the pay-off time is considered and pay-off times of a year or so are quite common. Several minor questions raised by Kuptsov are answered in detail.

It is concluded that Kuptsov's article is unfounded and tendentious, and that the correctness of the policy of reconstruction of draught equipment is fully confirmed. New circuits which are used in reconstruction are much more efficient than older ones and the new machines are more economical. The most promising type of fan is that with the blades curved backwards 2/3 which may be perfected to have an efficiency of 80 - 85% and which should be used for large new boilers and in the reconstru-

which should be used for large new boilers and in the reconstruction of existing equipment.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000824020017-7 The experience of Ontrice 1n the reconstruction of draught producing machinery. (Cont.) 104-4-7/40

3/3 There are three Slavic references. AVAILABLE:



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BAKAKIN, V.P.; BUBOK, K.G.; BUGAREV, L.A.; BUNIN, A.I.; VORCB'IEV, K.V. DROZDOV, V.V.; DOROKHOV, M.S.; ZUBRILOV, S.V.; IORAT'IEV, L.A. KABGOPOLOV, I.G.; KIUSHIN, D.N.; KOMAROV, A.M.; KURILOV, M.S.; LONAKO, P.F.; MINULXNKO, A.S.; MIKHATIOV, M.M.; MURTHOV, B.A.; OL'KHOV, N.P.; OSIPOVA, J.V.; PARHONV, Ta.D.; PLAKSIN, I.N.; PODCHAINOV, S.F.; FUSTLI'NIK, I.I.; ROZHKOV, I.S.; SAVARI, IG.A.; SHMTIN, A.P.; SPIVAKOV, Ya.M.; STRIGIN, I.A.; SUSHERNTSOV, S.N.; SHMTIN, A.P.; SPIVAKOV, Ya.M.; STRIGIN, I.A.; SUSHERNTSOV, S.N.; SHMTIN, A.P.; TROITSKIY, A.V.; USHAKOV, K.I.; KHARLAMOV, A.Yo.; SHMMINK, N.I.
Mikolai Konstantinovich Chaplygin. TSvet. met. 28 no.2:57-58 (MIRA 10:10) (Chaplygin, Mikolai Konstantinovich, 1911-1955)

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CIA-RDP86-00513R000824020017-7

137-58-5-9643 KOMAROV, A.M. Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 112 (USSR) Yegorov, S. M., Komarov, A. M. AUTHORS: Imperial Chemical Industries Nonferrous Tube Mill (Zavod po proizvodstvu trub iz tsvetnykh metallov angliyskoy firmy Imper-TITLE: ial Kemikel Indastris) Byul. tsvetn. metallurgii, 1957, Nr 18, pp 37-41 PERIODICAL: A process drawing (D) Cu and Al tubing (T) on vertical and horizontal draw blocks (B) is described. The vertical B have ABSTRACT: overhead drive. A distinctive feature of the vertical and horizontal B is the absence of undercut fillets. The T is wound on the B in uniform turns by automatic translation of the dieholder in the required direction by a special drive. V.O. 2. Aluminum tubing--Production 1. Copper tubing--Production 3. Industrial plants--Equipment Card 1/1

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FOPOV, S.G., dótsent; KOMAROV, A.M., assistent; SLUCHANOVSKAYA, 2.P., mladshiy nauchnyy sotrudnik
Aerodynamic characteristics of ring spinning machine travelers. Tekst.prom. 22 no.ll:77-82 N '62. (MIRA 15:11)
1. Sotrudniki kafedry aeromekhaniki i gazovoy dinamiki Moskovskogo gosudarstvennogo universiteta. (Spinning machinery)

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IOFE, (.l., insh.; KCMAROV, A.M., inzh.

Effect of auxiliary equipment on work indices of block systems with 150 and 200 Mw. ratings. Teploenergetika 12 no.6:2-10 Je '65. (MIRA 18:9)

1. Gosudarstvennyy trest po organizatsii ratsionalizatsii rayonnykh elektrostantsiy 1 setey.

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KOMAROY._Aleksey_Nikolayevich: KOSTROVSKIY. Georgiy Ivanovich: DUBROVSKIY. V.A., redaktorp HALLOD, A.I., tekhnicheskiy redaktor [Repair of "Stalinets=80" tractor] Remont traktora "Stalinets=80." Izd. 2-oe, perer. i dop. Moskva, Gos. izd-vo selkhoz. lit-ry. 1956. 383 p. (HIRA 9:11) (Tractors-Repairing)

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L 08572-67 ENT(c)/ENP(1) IJP(o) 69/BB	
ACC NRI AR6032061 SOURCE CODE: UR/0271/66/000/007/B018/B019	
AUTHOR: Komarov, A. N.	
TITLE: Mathematical logic of <u>arithmetic units</u> (Multistage adder with full parallel carry)	
SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 7B135	
REF SOURCE: Tr. Vses. zaoch. energ. in-ta, vyp. 29, 1965, 16-35	
TOPIC TAGS: mathematic logic, arithmetic unit, adder, multistage adder	
ABSTRACT: The problem of improving the speed of response of arithmetic units by the apparatus method is studied. It is suggested that multistage adders be designed with a full parallel carry. The block diagram of a 27-digit 3-stage adder is given as an example. With an equipment increase of 1.63, the count rate of the	
proposed adder increases by a factor of 4.5 as compared to usual adders with a sequential carry. The possibilities and merits of such circuits are investigated. In particular, in an adder with a full parallel carry the sign of an addition of two	
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Translation	from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 18 (USSR)	
AUTHOR:	Komarov, A. N.	
TITLE:	The MPD-6 Washer (Promyvochnyy pribor MPD-6)	
PERIODICAI	.: Kolyma, 1956, Nr 4, pp 13-15	
ABSTRACT:	The MPD-6 washer is a modification of the MPD-2, which has come into particularly wide use for washing in areas having small backlogs of prepared sands. A special feature of this new washer is a frame for installing a scrubber. It not only serves as runners, as in the MPD-2, but as a feed bin from which the sand is delivered for disintegration in the scrubber box. The framing is of channel and angle sections, with a 4 mm sheet of iron welded underneath to create a greater supporting surface. This design permits the frame to move over marshy terrain. A general view and drawing of the equipment, with an earth- mover in user to deliver sand to the sluice, is presented. The sequence of operations for assembly of the MPD-6 is described. A. Sh.	
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s/196/62/000/013/014/018 E194/E155 AUTHORS: Akopyan, A.A., Komarov, A.N., Kolechitskiy, Ye.S., Rodionov, Ya.V., and Fotin, V.P. TITLE: Testing of 500 kV air circuit breakers on the transmission line between the Volzhskaya GES imeni XXII s"yezda KPSS-Moskva (Volga GES imeni 22nd Congress CPSU-Moscow) PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.13, 1962, 19, abstract 13 E 142. (Elektr. stantsii, no.1, 1962, 37-45) TEXT: Tests were made on 500 kV air circuit-breakers type BBHP-20001-500/2000 (VVNR-20001-500/2000) with a rated current of 2000 A and a breaking capacity of 20 000 mVA, with ten extinction. chambers and with disconnectors having four breaks per phase. The circuit breaker is developed for a recovery voltage of 3.5 U = 1160 kV effective with a maximum formation time of 10 milliseconds. According to test laboratory data the 10 milliseconds. According to the strength, 2.7 U disconnector was of reduced electric strength, 2.7 U phase 820 kV

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s/196/62/000/013/014/018 E194/E155 The principal Testing of 500 kV air circuit = 1160 kV effective. object of the test was to determine the possibility of doing without shunting resistors of 3000-2000 ohms on the main extinction effective instead of 3.5 Uphase chambers. These resistors greatly increase the cost of the circuit breakers (1.5 tons of nichrome for a three-phase set) and according to data from preliminary tests on models, they are effective in reducing the overvoltage only when disconnecting unloaded sections of line accompanied by recurrent restriking of the arc in the circuit breaker. Tests were carried out with the the art in the circuit breaker, rests were carried out with the circuit shown in the sketch using a reduced working voltage of 450 kV on the receiving end of the transmission line 18. (sub-station no.2). Protective spark gaps were used to limit the value of the main tests were carried out on circuit breaker BB3 no.4). rrougelive spark gaps were used to the electromagnetic overvoltage. To assess the part played by the electromagnetic instrument voltage-transformers when disconnecting an unloaded line between substations nos. 2 and 4, all three voltage transformers were connected in the red phase, only two in the green phase and none in the yellow phase. Overvoltages and Card 2/0 C CIA-RDP86-00513R000824020017-7" APPROVED FOR RELEASE: 06/13/2000

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Testing of 500 kV air circuit ...

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currents were recorded at three positions: at substations 4 and 2 and at the hydro-power station. Seventy-eight effects were recorded simultaneously with multi-beam cathode-ray oscillographs and forty by means of electromagnetic oscillographs. The programme of investigations included: a) overvoltage measurements on interruption of electrical transmission under conditions of synchronous operation of the Moscow system and of the hydro-power station (the disconnection was effected by circuit breakers BB1, BB3 and BB4); b) similarly but with synchronous operation of the Moscow system and the power station (interruption was effected by circuit breaker BB3); c) overvoltage measurements on disconnecting an unloaded section of the line 423 km long between substations nos. 4 and 2 with circuit breaker BB4; d) overvoltage measurements on disconnecting an unloaded section of line 559 km long between the hydroelectric power station and substation no.2 by circuit breaker BB1; e) overvoltage measurements on disconnecting an unloaded section of the line 423 km long between substations nos. 4 and 2 by circuit breaker BB3. This section was disconnected as part of an unloaded line 982 km long (breaker BB4 was first opened). In this case the circuit-breaker Card 3/6

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Testing of 500 kV air circuit ...

operating conditions wore more severe than in tests c Detailed test results are tabulated. During the course of the programme there were cases of disconnecting short-circuits on the line, which occurred during several protective spark gap breakdowns, and also during inter-phase flashover of line insulators during one of the tests. These cases afforded the possibility of checking the reliability of the circuit breakers in disconnecting short-circuits and permitted the following new observations. The overvoltage wave which causes the short-circuit is reflected from the point of the short-circuit with inverted sign and is then doubled on the substation (or power station) busbars if these latter operate under 'dead end' conditions. Dangerous overvoltages then occur on the substation even before disconnection of the short-circuit commences. This circumstance caused additional operations of the protective spark gaps at the hydroelectric station when the protective spark gap operated in no.2 substation (tests on disconnecting unloaded section of 423 km by circuit breaker BB3) and during interphase flashover of line insulators occurring at the instant of interruption of a line Card 4/9

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Testing of 500 kV air circuit ... s/196/62/000/013/014/018 length of 981 km by circuit breaker BB4. E194/E155 are drawn from the tests. 1) Tests on circuit breaker VVNR-20001-500/2000 were carried out under difficult conditions in The following conclusions respect of recovery voltage (up to 3.85 U t = 5 - 10 milliseconds). They showed that the circuit-breaker extinction chambers operate with complete reliability under all the required switching conditions (interruption of synchronous and asynchronous transmission, disconnection of unloaded lines, disconnection of short-circuits, etc) without special resistors shunting the extinction chambers. 2) An electric strength of 2.7 U for the circuit breaker disconnector is insufficient for reliable operation in a 500 kV electrical transmission system and it should be raised to 3.5 U phase' [Abstractor's note: Complete translation.] Card 5/85

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12(2)	
· AUTHORS:	SOV/113-59-3-13/17 Komarov, A.R.; Khazova, A.V.; Titov, I.V.
TITLE:	The Modification of Cast Iron by Using Magnesium Under Pressure (Modifitsirovaniye chuguna magniyem pod davleniyem)
PERIODICAL:	Avtomobil'naya promyshlennost', 1959, Nr 3, pp 40 - 43 (USSR)
ABSTRACT: Card 1/6	The imperfection of methods for introducing magnesium and other modifying additions to liquid cast iron is one of the reasons why high-strength cast iron has found no wide-spread use. In the USSR, pure metallic magnesium, its alloys or magnesium- containing mixtures are used as modificators. The author reviews briefly the different methods used in the USSR. At the Gor'kovskiy avtozavod (Gor'- kiy Automobile Plant) the modification with pure magnesium was performed under a bell-shaped chamber with a special device providing a sufficiently deep penetration of the magnesium into the liquid

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SOV/113-59-3-13/17 The Modification of Cast Iron by Using Magnesium Under Pressure metal as shown by Figure 1. This method had the disadvantage that the magnesium consumption is up to 1% of the weight of cast iron and it does not reliably provide high-strength cast iron with globular graphite structure. At the Syzranskiy gidroturbinnyy zavod (Syzraf Hydraulic Turbine Plant) a method was developed using a forehearth furnace as shown by Figure 2. The magnesium consumption amounts to only 0.4 - 0.6% of the cast iron weight, while the assimilation of the magnesium is up to 10 - 15% compared to 5 - 10% with the first method. However, the operation of the furnace is interrupted and the use of the forehearth capacity is limited to 50 - 60%. At a number of ylants, devices for introducing magnesium were tested, whereby a rotat-

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SOV/113-59-3-13/17 The Modification of Cast Iron by Using Magnesium Under Pressure ing crucible with a special chamber was used which was connected with the interior cavity by a special canal. The device (Figure 3), designed at the Gor'kiy Automobile Plant, may serve as an example for this type. Thereby, a magnesium assimilation of 20 - 25% was obtained. Recently, methods were developed which were based on increasing the evaporation temperature of magnesium by increasing the pressure on the metal surface in hermetic devices. Figures 5 and 6 show examples of such devices. The latter was developed by TsNIITMASh. Figure 7 shows a device designed by the Czech engineer Otahal. He established that the amount of magnesium required for modifying cast iron is considerably lower at a pressure of 5 - 5.5 atm. In this case, the amo In this case, the amount of magnesium required is only 0.2% of the weight of the cast iron as shown by a graph (Figure 8). NIITAvtoprom investigated the cast iron modification by magnesium when the cast iron crankshafts Card 3/6 of the automobile "Volga" were introduced, and de-

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SOV/113-59-3-13/17 The Modification of Cast Iron by Using Magnesium Under Pressure veloped the laboratory device shown in Figure 9. It consists of an airtight chamber into which the crucible with the liquid cast iron is placed. The magnesium is pushed into the liquid cast iron by a bar from the cover of the chamber. The latter is filled with compressed air which was varied during the tests from 3 to 8 atm, while the metal tem-perature was 1420. For all tests, amounts of magnesium equal to 0.2% of the weight of the cast iron were used. According to the graph, Figure 10, the best results were obtained at a pressure of 5 - 6 atm, since then the air pressure was about equal to the pressure of saturated magnesium vapors whereby also a thorough mixing of the metals was obtained. Based on the experiments of NIITAvtoprom, two projects were developed. One, constructed by NIITAvtoprom itself, is shown by Figure 11. With this equipment, the modification of 500 kg cast iron lasts 1 - 1.5 minutes. The other version was developed by the Gor'kiy Automobile Plant and is Card 4/6

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SOV/113-59-3-13/17 The Modification of Cast Iron by Using Magnesium Under Pressure shown by Figure 12. This equipment consists of a cylindrical chamber 1,500 mm in diameter and 3,000 mm long. The crucible containing 500 kg of liquid cast iron is placed on a small truck which is pulled by an electric winch into the interior of the chamber. The chamber entrance is closed by an airtight spherical door. Another opening is located at the top of the chamber, also closed by an airtight door, for introducing the container with the magnesium. A pneumatic cylinder is used for pushing the charge into the liquid metal. The chamber is filled with compressed air at a pressure of 6 atm, whereby 6 cu m compressed air are required. The modification pro-cess lasts about 1.5 - 2 minutes and the entire operation 4 - 5 minutes. The liquid iron is trans-ferred to the casting crucible, where 0.3% pulverized 75%-ferrosilicon and 0.025% cryolith are added for reducing the sulfur content. By melting cast iron in an electric arc furnace with basic lining Card 5/6 and by modification with magnesium, it is possible APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000824020017-7"

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SOV/113-59-3-13/17 The Modification of Cast Iron by Using Magnesium Under Pressure to obtain high-strength cast iron with a structure of globular graphite. The consumption of pure magnesium is thereby 0.06 - 0.08% of the weight of the liquid cast iron. When the sulfur content of cast iron is 0.003 - 0.005% and 0.002 - 0.003% after the modification, then it is adequate to have a magnesium content of 0.01 - 0.03% for obtaining cast iron with globular graphite. The modification equipment of the Gor'kiy Automobile Plant is used for the production of crankshafts of the "Volga" automobile and shows good results, thus it may be recommended for mass production of high-strength cast iron parts. There are 3 photographs, 7 diagrams, 2 graphs, 1 table and 5 Soviet references. ASSOCIATION: NIIT Avtoprom, Gor'kovskiy avtozavod (Gor'kiy Automobile Plant) Card 6/6

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18(5)SOV/128-59-4-3/27 AUTHOR: Komarov, A.R., Engineer TITLE: Heating Cupola Blast PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 4, pp 8-9 (USSR) ABSTRACT: There are different methods at the present of heating the cupola blast in recuperators, standing outside the cupola shaft. These methods, however, could not be applied in the foundries of the Gorki auto works, because an additional space is needed for the combustion chamber, the filters, and the recuperator, which was not available there. The recuperator was, therefore, placed into the shaft of the cupola. Since it is not possible in this case to install dust col-lectors, a recuperator of the radiating type was chosen, which does not cause contamination. Despite the limited dimensions of the recuperator, the speci-fic thermal conductivity is very high, and the temperature of the blast when leaving the recuperator goes up to 265°C. A second method applied in the Gorthy Card 1/2 plant to preheat the blast is the screening of the

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Heating Cupola Blast

SOV/128-59-4-3/27

cupola by a hydraulic closure. An an effect of the screen, a large surface is heated. Thermal and metallurgic experiments will have to decide which method to heat the cupola blast is to be chosen. There are 3 photographs and 2 diagrams.

Card 2/2

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Redesign of cupola furnaces in the Gorkiy Automobile Plant foundry shops. Mt. proizv. no.9:16-17 S '60,

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KOMAROV, A.S., kand.med.mauk Retroporitoneal rupture of the duodenum in closed trauma. Vest.khir. no.5195-96 '62. (MIRA 15:11) 1. Iz kafedry obshohey khirurgii (zav. - prof. A.I. Kozhevnikov) Gor'kovskogo meditsinskogo instituta (rektor - dotsent I.F. Matyushin). (DUODENUM-RUPTURE) APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000824020017-7"

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*APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000824020017-7 KARETNIKOV, A.D., doktor tekhn. muk, red.; KDMAPOV, A.V., doktor tekhn. nauk, red.; STINIK, M.D., red.: nauk, red.; FEEDE, V.Iu., inzh., red. [Coordination of the work of the various types of transportation] Koordinatsiia raboty razlichnykh vidov transporta. Moskva, Izd-vo "Transport," 1964. 199 p. (NIRA 17:4)

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KOMAROV, A. PA 1537105 Nov 49 USSR/Radio - Radio Receivers Radio Phonographs "The Minsk P7 Radiophonograph and the Minsk Receiver," A. Komarov, 4 pp "Radio" No 11 Minsk Radio Plant imeni Molotov is producing a table radiophonograph, based on the Minsk radio receiver. Describes instrument in detail, with two circuit diagrams, three photographs, and three tables. 153T105

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Massovye bataroinye radiopriemniki. [Battery operated receivers (radio]]. Moskva, Gosenergolzdat, 1951. 80 p.

SO: <u>Soviet Transportation and Communications</u>, A Bibliography, Library of Congress, Reference Department, Washington, 1952 Unclassified.

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KOMAROU, A.V. KOMAROV, A.V.; LEVITIN, Ye.A.; TARASOV, F.I., red.; BABOCHKIN, S.M., tekhn.red. [Radio receivers; the "Moskvich" radio receiver and the "Kawa" radio-phonograph combination] Radioveshchatel'nye priyemniki; radiopriemnik "Moskvich," radiola "Kama." [Moskva, 1952] 11 p. (Massovaia radiobiblioteka, no.141) (MIRA 10:12) (MIRA 10:12) (Radio--Receivers and reception)

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