

- 1992, 1 - 2 . 16 -18. **5.** Ganesh V., Vijayaraghavan D., Lakshminarayanan V. Fine grain growth of nickel electrodeposit effect of applied magnetic field during deposition // Appl. Surf. Science. - 2005, 240, Issues 1 - 4, 285 - 295 **6.** Uhlemann M. Effect of magnetic field on the local pH value in front of the electrode surface during electrodeposition of Co // Electroanalytical chemistry. - 2006, vol. 587, Issue 1, 93 - 98. **7.** Hinds G.; Spada F.E.; Coey M. D. Magnetic field effects on copper electrolysis // Phis. Chem. -, 2001, 105, 9487 - 9502.

15.10.06

541.131 : 620.9.93

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The kinetic parameters of copper in sulphate of copper with the additives of ethylen glycol and dioxide of silicon in conditions close to equilibrium are investigated. Are determined a current of an exchange and polarizing resistance, which testify to an opportunity of a long presence of copper in these solutions, that takes place in copper-sulphate electrode of comparison.

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(,).

[1, 2].

CuSO₄

(-

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$$E_{Cu^{2+}/Cu} = 0.3 \pm 0.01$$

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-

(~ 10)

CuSO_4 ,

30 %

[3].

CuSO_4

-2

-8

50 - 1.1

-4.

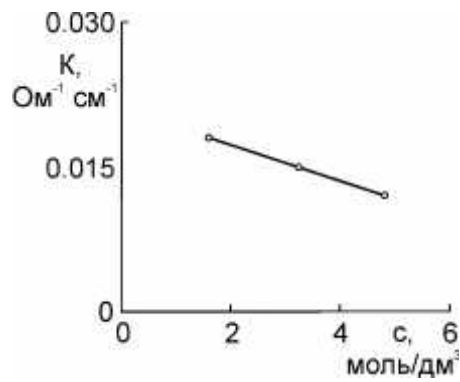
0.201

~ 1.4

/ ³

.1

CuSO_4



.1.

CuSO_4

1.4 / 3 CuSO₄ (1) -
 (2), SiO₂ - (-

3).

$$0 \div 5 \cdot 10^{-2} / ^2$$

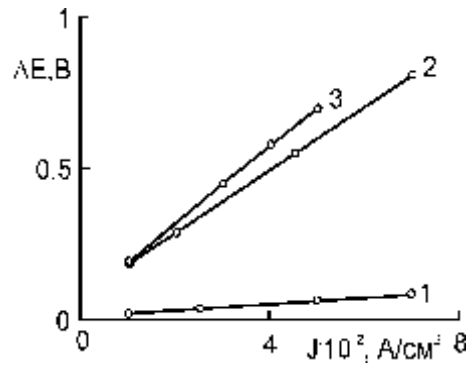
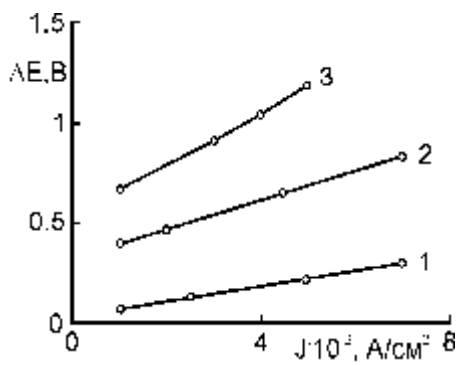
j (. 2),

$$\Delta E = R \cdot j; \quad R = \frac{RT}{nF} \cdot \frac{1}{j_0}; \quad j_0 = \frac{b_0}{R \cdot n}.$$

- , ; R - , ;

$$b_0 - 2.3 \cdot R \cdot T / n \cdot F = 0.059/n \quad t = 25^\circ\text{C};$$

j₀ - , / ^2.



. 2. () ()
 1 - 1.4 / 3 CuSO₄; 2 - 30 % ;
 3 - 30 % 10% SiO₂.

$$0 \div 3 \cdot 10^{-2} / ^2$$

(8 · 10⁻² / ^2)

(. 2), -

CuSO₄

. 3

(1)

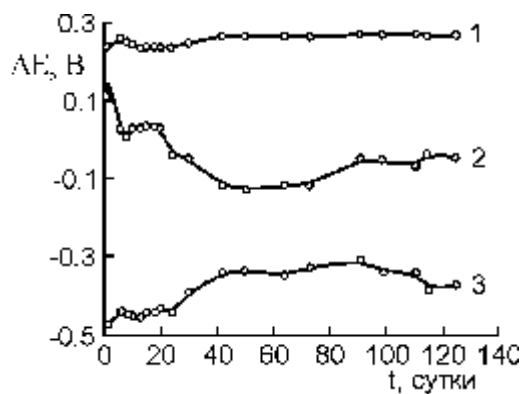
0.01 ÷ 0.02 . 2 3

(2) 08 (3)

(, 1 % NaCl Na₂SO₄).

15 ÷ 25 °C.

		$j_0, / ^2$	R ,
1.CuSO ₄	E() = 2.78j	$4,6 \cdot 10^{-3}$	2.78
2.CuSO ₄ + /	E() = 13.79j	$0,93 \cdot 10^{-3}$	13.79
3.CuSO ₄ + / +	E() = 22j	$0,58 \cdot 10^{-3}$	22
1.CuSO ₄	E(a) = 1.05j	$12,25 \cdot 10^{-3}$	1.05
2.CuSO ₄ + /	E(a) = 8.69j	$1,48 \cdot 10^{-3}$	8.69
3.CuSO ₄ + / +	E(a) = 13.33j	$0,96 \cdot 10^{-3}$	13.33



. 3. (1)

08 18 9 (2) 08 (3) 1% NaCl + 1% Na₂SO₄

1.
CuSO₄

2.

- : 1. , 1993. – 540 .
- 2. ; , 1981. – 632 .
- 3. u 2006 04243, 2006. ,

15.10.06

541.13; 621.35

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Aluminum alloys and stainless steel form forming anodic treatment leading to specific area growth was investigated. Electrolyte composition as well as no stationary electrolysis regimes influence on the morphology and extended surface value under mechanic resistance retention was established. The general lows for passivating metals surface treatment control were justified.

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