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 • • • • • , • • • • • , « »

TiO₂

Influence of composition of a composite covering of the anode on kinetics of processes at electrolysis of water solutions of iodate of sodium has been studied. PbO₂ and TiO₂ are components of a composite covering of the anode. The increase in maintenance TiO₂ of a component brakes the combined process of excretion of oxygen and increases a share of a current by synthesis NaIO₄.

()

H₂SO₄ [1–3].

TiO₂

5],

TiO₂

[4,

PbO₂ TiO₂

102 • ⁻³ NaIO₃ 4 • ⁻³ NaIO₄.

313 .

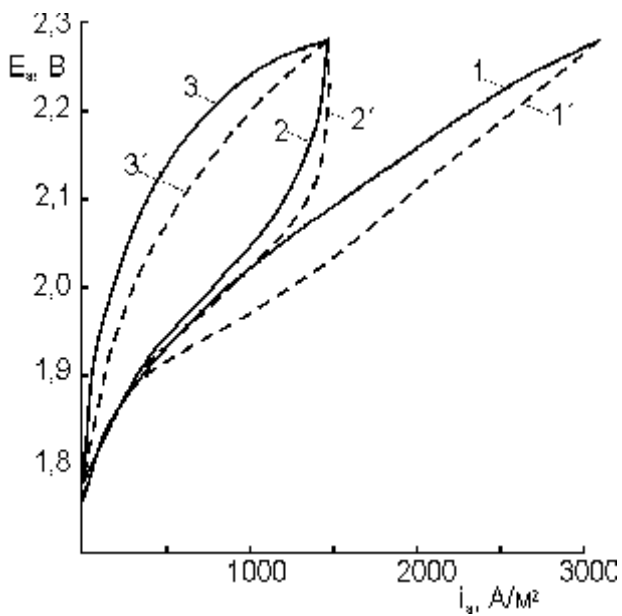
, PbO₂

PbO₂,

	NaIO ₄ (· - ²)			NaIO ₄ (%)		
	()			()		
	2,1	2,2	2,3	2,1	2,2	2,3
Pt	1210	1440	1540	77	68	50
	950	1350	1500	76	69	52
PbO ₂	425	750	1125	65	60	43

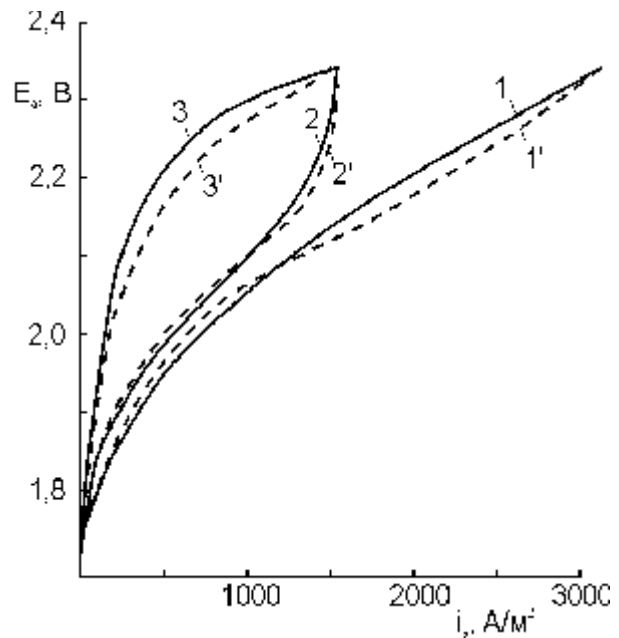
(. . 1. .) (. . 1. .) , ≈ 2,1 -
IO₃⁻.

2,2



. 1. (1, 1')
(3, 3')

()



() . 1-3 , 1'-3' (2, 2')

2,0...2,1 . -
PbO₂ -

2,0...2,1

1400...1500 .⁻².

TiO₂

TiO₂

[IO₃⁻]:[IO₄⁻] = 1:1

2,2

PbO₂

2.

PbO₂ 10 25 % ..

25

50 %

PbO₂ ≥ 50 %

PbO₂ 10 50 %

PbO₂

(. 3)

PbO₂ 40...60 %

PbO₂ 40 %

PbO₂ 60 %

PbO₂

PbO₂

60 %

PbO₂.

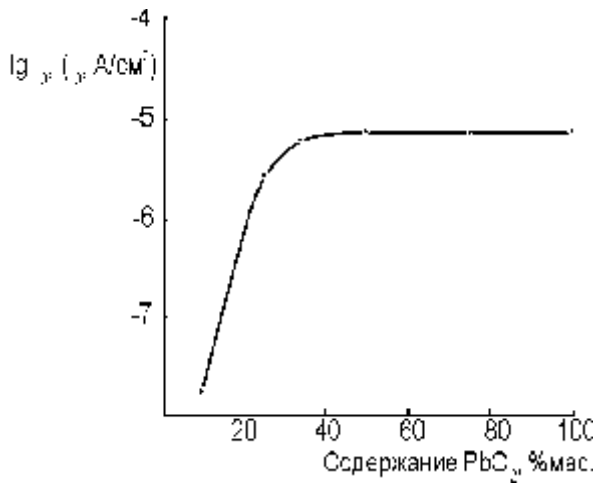
(

TiO₂ –

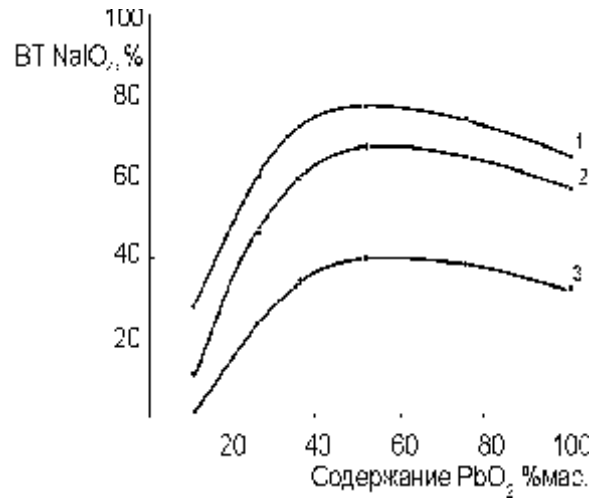
)

PbO₂

-



. 2.



. 3.

NaIO₄

[IO₃⁻]:[IO₄⁻]: 1 –

9:1; 2 – 1:1; 3 – 1:9. j_a = 1000 A · cm⁻²

TiO₂

PbO₂.

: 1.

“ ”. – : “ ”, 2006. 12, 122–128. 2.

: “ ”, 2005. 16, 146–149. 3.

: , 2005. 2, 181–184. 4.

// : . 34, 1991, . 84–153. 5.

. 1986. 12. 3–60.

11.1.06