

# Current Efficiency Obtained with SnO<sub>2</sub>-based Inert Anodes in Laboratory Aluminium Cell

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A systematic study of the current efficiency (CE) in a laboratory aluminium cell with SnO<sub>2</sub>-based inert anodes was carried out by measuring the overall amount of oxygen relieved at the anode, using two different methods.

Inert ceramic anodes of 96% SnO<sub>2</sub>, 2% Sb<sub>2</sub>O<sub>3</sub>, 2% CuO in wt% composition were prepared and investigated. The influence of: temperature, current density, anode-cathode distance, cryolitic ratio, content of alumina and different additives was studied. At the same time the influence of the age of boron nitride (BN) sheath of the inert anode on the CE was evaluated.

*Key words:* Inert Anodes; Current Efficiency; Aluminium Electrolysis; Ceramic Anodes;  
Molten Salts Electrolysis.