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A review of tubular solid oxide fuel cell spray coating process

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Tubular solid oxide fuel cells (TSOFCs) have been recognized as one of the most promising technology which can generate chemical energy of fuels to electrical energy efficiently. TSOFC has mainly three layers (anode, electrolyte and cathode) to produce electricity electrochemically. Production of these layers homogenous and sufficient thickness is important parameter to decrease polarization losses in fuel cell. Especially ohmic losses increase with thickness of the electrolyte dramatically and that affects the performance of tubular-SOFC. Therefore developing thin and dense electrolyte layer plays a crucial role for tubular-SOFCs working performance. In recent years, studies have focused on this issue to produce most effective thin and dense electrolyte, since the coating techniques plays an important role for the general performance of the tubular-SOFC. One of the common coating techniques spray coating is the simple and cheaper technique for SOFC works. This technique includes mainly spraying equipments and turning substrates of SOFC components.

Biography

Selcuk Sarıkoc has completed his bachelor's science in Mechanical Engineering department from Erciyes University and is also Master Science's student. He studies on solid oxide fuel cells.

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