

Development of Light Weight Active Direct Methanol Fuel Cell

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Abstract

Active Direct Methanol Fuel Cell (ADMFC) is chemical energy to electrical energy converter device akin to a battery for portable electrical appliances. Its construction is simple and compact without moving parts. One of the objectives is to develop a lightweight active direct methanol fuel cell for better portability and to improve the gravitational power density of the cell. At present assembling of the cell, it is made using Mild Steel (MS) bolts and nuts with insulating sleeves and Bakelite washers for maintaining electrical isolations. The density of the MS material is 7.8 g/cm³. Hence less density material having the compatibility with a dilute methanol environment is a better solution for aiming at a reduced weight of the cell. Hence FRP fasteners comprising bolts and nuts are well suitable for the replacement of the MS bolting system.

Keywords

Active, Direct, Methanol, Fuel Cell, Mild Steel