

Interactive Presentations (IP)
Topic 2 - Interactive Presentations (2)

Author: Mr. Liu Jian

Beijing Spacecrafts China Academy of Space Technology (CAST), China, liujian1988620@163.com

A SIMULATION STUDY FOR A SPACE FUEL CELL'S MAXIMUM POWER TRACKING AND
CONTROL

Abstract

This paper takes a space fuel cell as a research subject, combining power curves and load characteristics, conducting a simulation study of its maximum power tracking and control. The simulation model built in this paper consists of a fuel cell, a maximum power tracking regulator, a controller and load. The control strategy adopts state machine control. Combined with practical application requirements, aim at the load mutation condition, the study of the fuel cell's working states and load bus's characteristics under state machine control strategy has been conducted. The simulation results have been analyzed according to the experiment conditions. The simulation experiments' results show that the fuel cell adopting the maximum power tracking and control strategy is effective and the application in fuel cell's power system is feasible.