

An Empirical Dynamic Fuel Cell Model Used for Power System Verification in Aerospace

Authors : Giuliano Raimondo, Jörg Wangemann, Peer Drechsel

Abstract : In systems development involving Fuel Cells generators, it is important to have from an early stage of the project a dynamic model for the electrical behavior of the stack to be shared between involved development parties. It allows independent and early design and tests of fuel cell related power electronic. This paper presents an empirical Fuel Cell system model derived from characterization tests on a real system. Moreover, it is illustrated how the obtained model is used to build and validate a real-time Fuel Cell system emulator which is used for aerospace electrical integration testing activities.

Keywords : fuel cell, modelling, real time emulation, testing

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