

ABSTRACT

A method for diagnosing the operating state of an electrochemical system in real-time comprising a stack of cells, said method comprising steps for performing voltage measurements of said cells. Said method further comprises: real-time processing of the voltage measurements (61) thus performed, in order to extract specific waveforms (40) therefrom, converting said specific waveforms in order to generate specific points (65) therefrom of the real-time operation of the electrochemical system, and comparing these specific points of the real-time operation and specific points (75) of an off-line operation of the electrochemical system that originate from a conversion of specific waveforms (74) extracted from voltage measurements (78) performed off-line, while the electrochemical system is placed in known operating states including fault states, so as to produce information (69) relating to the real-time operating state of the electrochemical system.

[Figure 6]