عنوان مقاله:

Water Management in a PEM Fuel Cell using two phase single-domain Model

محل انتشار:

دومین همایش پیل سوختی ایران (سال: 1387)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

In the present work, we have developed a mathematical model for liquid water formation and its transport in all regions of PEM fuel cell. The governing equations are presented for water both in vapor and liquid at equilibrium and when it is present individually. Using appropriate assumptions together with CFD technique leads to a single domain numerical solution. The governing equations are solved and theoretical performance of a PEM fuel cell is investigated by looking at parameters such as pressure, temperature, water in liquid and vapor form and species concentration in two-phase region. The results are shown to be in good agreement with previous work and it is validated with recent .experimental data available

کلمات کلیدی: