World Academy of Science, Engineering and Technology
International Journal of Materials and Metallurgical Engineering
Vol:8, No:08, 2014

# Experimental Investigation of Performance Anode Side of PEM Fuel Cell with Spin Method Coated with YSZ+SDC

**Authors :** Gürol Önal, Kevser Dinçer, Salih Yayla

**Abstract :** In this study, performance of proton exchange membrane PEM fuel cell was experimentally investigated. Coating on the anode side of the PEM fuel cell was accomplished with the spin method by using YSZ+SDC. A solution having 0,1 gr YttriaStabilized Zirconia (YSZ) + 0,1 Samarium-Doped Ceria (SDC) + 10 mL methanol was prepared. This solution was taken out and filled into a micro-pipette. Then the anode side of PEM fuel cell was coated with YSZ+ SDC by using spin method. In the experimental study, current, voltage and power performances before and after coating were recorded and then compared to each other. It was found that the efficiency of PEM fuel cell increases after the coating with YSZ+SDC.

**Keywords :** fuel cell, Polymer Electrolyte Membrane (PEM), membrane, spin method
**Conference Title :** ICMSE 2014 : International Conference on Materials Science and Engineering
**Conference Location :** Amsterdam, Netherlands
**Conference Dates :** August 07-08, 2014