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عنوان مقاله:

Thermodynamic and exergetic analysis of a PEMFC-TEC cogeneration plant based on Organic Rankine Cycle

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خلاصه مقاله:

With the extensive global development of fuel cells during recent years, an interest in exploiting the heat which is rejected within the stack of the fuel cell has arisen. Proton Exchange Membrane Fuel Cells are no exception even though their operating temperature is relatively low. The present research aims to study the combination of Proton Exchange Membrane Fuel Cells and Organic Rankine Cycles based on the concept of Ocean Thermal Energy Conversion cycles while employing different organic working fluids from a thermodynamic and exergetic standpoint. Ammonia seems to demonstrate the most suitable output parameters by a very little margin.

کلمات کلیدی:

Proton Exchange Membrane Fuel Cell, Thermal Energy Conversion, Organic Rankine Cycle, Cogeneration

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