



PLASMA REACTORS AS AN ALTERNATIVE FOR THE CLASSIC TECHNOLOGIES - METHANE STEAM REFORMING WITH OXYGEN IN A MAGNETIC BLOW OUT *GLIDARC* REACTOR

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Abstract

One of the most viable near-term options for energy conversion involves the development of simple small-scale steam methane reformers to produce hydrogen at local fuel stations, or of the combined reformer-fuel cell systems for possible automotive applications. The present work deals with the study of methane steam reforming with oxygen in a new type of gliding arc reactor. The process is described in terms of methane conversion, reaction selectivity, and energy cost. The paper confirms previous conclusions on the reaction mechanism and reveals some specific aspects of the studied process.

Keywords: mechanism, thermodynamics, conversion, energy cost, non-equilibrium

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