



“Gh. Asachi” Technical University of Iasi, Romania

COMPARISON BETWEEN MODEL AND EXPERIMENT ON HYDROGEN PRODUCTION BY METHANE STEAM REFORMING IN GLIDARC REACTORS

Iulian Rusu*

*Technical University of Iasi, Faculty of Chemical Engineering, 71Mangeron Blvd., 700050, Iasi,
Romania*

Abstract

The glidarc discharges allow high specific throughputs *in the reaction zone*, which generally largely exceed other chemical methods, including electrochemical and thermal ones. The article continues the study of a model describing the methane steam reforming by means of different constructive types of gliding arc reactors. Despite the fact that the non-thermal plasma processes are considered non-equilibrium ones, the proposed mechanism based on classical thermodynamics gives a very good image on the chemical processes occurring in the reactor.

Keywords: glidarc reactor, electric discharge, syngas, mechanism

* All correspondence should be addressed at: e-mail: rusu_iulian@hotmail.com, fax: +40 232 271311