

Dynamic behavior analysis for IGCC Gas Purification Plant-Wide Process

임성수, 최봉구, riezqa andika, 박성구¹, 이문용*
영남대학교; ¹두산중공업
(mynlee@ynu.ac.kr*)

Nowadays, many engineer are focus on high efficiency and low emission chemical plant. Integrated Gasification combined cycle (IGCC) is potentially available to adapt to korea electric power plant. In short, IGCC is generated electric power by coal-to-gas and combustion. during coal-to-gas process in gasifier, many pollutants will be generated, so, unit operation of gas purification process will remove each pollutant, for example HCN/COS hydrolysis reaction. each unit operation well known as general process, but these dynamic behavior and control optimisation are not known by any specific disturbance. In this paper, several control strategies are proposed for the Purification process of IGCC plant using HYSYS Dynamic simulation tools.

Acknowledgement

This work was supported by the Development of 300MW class Korean IGCC demonstration plant technology of the Korea Institute of Energy Technology Evaluation and Planning(KETEP) and Doosan Heavy Industries and Construction grant funded by the Korea government Ministry of Knowledge Economy.(2011951010001A)