CO_2 capture during the methane-steam reforming

백일현*
한국에너지기술연구원
(ihbaek@kier.re.kr*)

During the methane steam reforming(MSR) process, it is customary to release the product carbon dioxide to the environment, which is a greenhouse gas with a potential to contribute the global warming. To be ready for possible mandatory obligation to lessen the amount of carbon dioxide released, it is important for the petrochemical industries to develop any means to capture/sequestrate carbon dioxide from their processes. Therefore, the catalytic methane steam reforming with the simultaneous absorption of carbon dioxide as byproduct produced from MSR was applied. A commercial Ni-based reforming catalyst(ICI 57-7) was used in combination with the CaO pellets prepared, and the experiments with various operating conditions such as temperature, GHSV, and concentrations were carried out.