

0.2 Nm₃/hr 및 1.0 Nm₃/hr 급 연소후
CO₂ 분리막 공정 평가장치 개발

문종호, 여정구*

한국에너지기술연구원

(jgyeo@kier.re.kr*)

In order to apply membranes to the real CCS processes, permeation and separation characteristics of each membrane should be evaluated with appropriate working conditions and rigorous regulations. 0.2 Nm₃/hr and 1.0 Nm₃/hr scale test equipments were built at KIER combustion-gas processing complex laboratory building. Those test equipments can control temperature, pressure, flow rate, steam amount, gas composition, stage cut, and also real flue gas from 10MWth scale CFB(circulating fluidized bed) boiler can be supplied. In this study, hollow fiber type commercial poly sulfone membrane modules were used for establishing standardization of membrane processes for CCS and certificating membrane performance such as permeance, selectivity, chemical-physical resistance and long term operability.