Performance of IGCC pilot plant with hot fuel gas desulfurization

강석환*, 이승종, 변용수, 김문현, 윤용승, 박영철[1], 백점인[2]
고등기술연구원; [1]한국에너지기술연구원; [2]한국전력연구원
(seog_hwan@daum.net*)

Integrated coal gasification combined cycle (IGCC) operation was performed taking two coals (Indonesian ABK and MSJ), that differ in their carbon and sulfur contents. A dry-feeding entrained-bed type gasifier was used for gasification with oxygen and capable of operating at 30 bar pressure and 1550 °C temperature. The hot fuel gas desulphurization unit (HGD) consisted of a transport desulfurizer, a bubbling regenerator and a multi-cyclone. Attention was focused on attaining high carbon conversion and cold gas efficiency in the entrained bed reactor and the sulfur removal efficiency of the hot fuel gas desulphurization unit. The optimum conditions for achieving high performance of the operation are reported. (본 연구는 2011년도 지식경제부의 재원으로 한국에너지 기술평가원(KETEP)의 지원을 받아 수행한 에너지자원융합원천기술개발사업 연구과제 입니다. No. 201120102004C)