

혼합형 재연소 기술의 열전달 특성 및 NO_x 저감 효과

이창엽[†] · 백승욱* · 김혁수**(한국과학기술원)

The Effects of Advanced Reburning on Heat Transfer Characteristics and NO_x Reduction

Chang Yeop Lee, Seung Wook Baek and Hyuk Su Kim

Key Words: Reburning(재연소), Selective non-catalytic reaction(선택적 무촉매 환원반응), LPG flame(LPG 화염), Heat transfer(열전달), NO_x(질소산화물)

Abstract : An experimental study has been conducted to evaluate the effects of advanced reburning and SNCR on NO_x reduction and heat transfer characteristics. The paper reported data on flue gas emissions, temperature distribution in furnace and various heat fluxes at the wall for a wide range of experimental conditions. In a steady state, the Total as well as radiative heat flux from the flame to the wall of furnace has been measured. Temperature distribution and emission formation in furnace have been also measured and compared.

분진 배출특성에 대한 주요 중질유 성상의 영향

이용일[†](SK 주식회사) · 이정표*(SK 주식회사) · 정홍석**(SK 주식회사)

The Effects of Main Heavy Fuel Oil Properties on Dust Emission Characteristics

Yong-Il Lee, Jeong-Pyo Lee and Hong-Seok Jung

Key Words: Heavy Fuel Oil(중질유), Dust(분진), Carbon Number(탄소 수), Kinematic Viscosity(동점도)

Abstract : Most HFO(heavy fuel oil) properties are analyzed and studied to understand the effects of main fuel components related to dust emissions. Main properties of HFOs considered in this study were kinematic viscosity, specific gravity, CCR(conradson carbon residue), asphaltene contents and so on. Combustion test facility of 800,000 kcal/hr heat capacity was used to evaluate the combustion stability and emission characteristics for 7 kinds of different heavy fuel oils and dust emission characteristics were evaluated by dust measuring instrument. Finally it was found that the kinematic viscosity and the heavy fractions related with higher boiling range of HFOs were considered as main dust arising parameters.