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E-BABE- Improving the removal of sulfuric acid droplets in the process of limestone gypsum desulfurization

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It is commonly accepted that the sulfuric acid droplets is unfavorable to human health and environment and this issue is concerned widespread. According to the statistics, the main source of sulfuric acid droplets is from power-plant. This paper aims to improve the removal of sulfuric acid droplets during desulfurization. Trays are installed into the desulfurization tower to uniform the distribution of the flue gas and increase the contact time. The results shows that the installation of the tray promotes the removal performance of sulfuric acid droplets. The reduction efficiency increases from 40%-50% to 70%-85% with the installation of tray and the installation of double trays is more effective than single trays. The installation of tray makes the contact of flue gas and desulfurization slurry completely more. Moreover, the initial temperature, humidity and liquid to gas ratio of flue gas also has a significant influence on the removal of sulfuric acid droplets. However, the installation of tray increases the resistance of the desulfurization system.

Biography

Rui Zhang is a PhD candidate at School of Energy and Environment, Southeast University since 2017. Her current research is mainly focus on the control of combustion pollutant.

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