

A study on Al-based catal-sorbents to remove hydrogen sulfide and ammonia at high temperature

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To remove hydrogen sulfide and ammonia simultaneously from hot coal-gases, the Al-based catal-sorbents prepared by impregnation method were prepared with various metals such as cobalt, nickel and molybdenum. Their simultaneously removal capacities of the hydrogen sulfide and ammonia were tested in a micro-reactor under coal gas condition at 650°C. The ammonia decomposition abilities of Al-based catal-sorbents showed good abilities for removal hydrogen sulfide and ammonia eventhough metal oxide catal-sorbents show poor removal abilities. The ammonia decomposition abilities of Al-based catal-sorbents were affected by the sulfur removal ability.