

High Efficient desulfurization technology of membrane system

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Membrane gas absorption technology is a promising alternative to conventional technologies for the high efficient acid gases. In this work, Removal of SO₂ from coal-fired flue gas with low concentrate of SO_x out in a polypropylene hollow fiber membrane contactor using aqueous NaOH, CaO, Na₂SO₃ as the absorbent. The influences of absorbent concentrate, liquid and gas flow rates on the absorption performance of SO₂ was investigated. . The experimental results indicated that the membrane contactor could eliminate SO₂ gas effectively. Absorption of SO₂ gas was enhanced by the increase in liquid flow rate and decrease in gas flow rate. In addition, Long term operation of removing SO₂ was carried out in order to duration performance and SEM analysis was performed at intervals of 2 weeks for 10 weeks in order to confirm the damage inside the membrane, but no internal damage was observed.