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Drying of Lignite under Low Temperature Fluidization

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The fluidized drying process of lignite was conducted under relatively low temperature. The effects of surface water, drying temperature, hot air flow and drying time on the characteristics of lignite drying process were investigated by measuring the removal efficiency of surface water and the quantity of adhesive dense medium. Results showed that the drying temperature and time, which were determined by the content of surface water, affected lignite drying significantly. The removal efficiency of surface water increased continuously with increasing drying temperature and time. The difficult separated lignite with surface water 0.8% was dried at 70℃ for 3 min, the removal efficiency of surface water reached up to 95%, and the probable deviation *E* decreased to 0.045g/cm^3. Moreover, the quantity of adhesive medium was only 0.1% before demedium.
Keywords: lignite; fluidization; drying; adhesion; separation