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Measurement of Coal Fineness, Air Fuel Ratio, and Fuel Weight Distribution in a Vertical Spindle Mill's Pulverized Fuel Pipes at Classifier Vane 40%

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Abstract : In power generation, coal fineness is crucial to maintain flame stability, ensure combustion efficiency, and lower emissions to the environment. In order for the pulverized coal to react effectively in the boiler furnace, the size of coal particles needs to be at least 70% finer than 74 μm. This paper presents the experiment results of coal fineness, air fuel ratio and fuel weight distribution in pulverized fuel pipes at classifier vane 40%. The aim of this experiment is to extract the pulverized coal is kinetically and investigate the data accordingly. Dirty air velocity, coal sample extraction, and coal sieving experiments were performed to measure coal fineness. The experiment results show that required coal fineness can be achieved at 40 % classifier vane. However, this does not surpass the desired value by a great margin.

Keywords : coal power, emissions, isokinetic sampling, power generation
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