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## Research on rotary triboelectric separation and its innovative factors on decarbonization of fly ash

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On the basis of understanding the principle of rotary triboelectrostatic separation, the structure and working process of rotary triboelectric separation and its influencing factors on decarbonization of fly ash were described. Dynamic analysis of charged fly ash particles aimed at determining the key factors and separation experiments to improve decarbonization efficiency had been carried out. Besides, on the basis of the thing that the size composition and mineral composition of fly ash samples were analyzed. To confirm the effect of the major innovative factors, the influence of key parameters such as friction wheel speed and plate voltage on the decarbonization efficiency of decarbonization continuously rose and in its selected range, the optimal voltage level was 45 kV; the corrected wind speed could impact the efficiency of decarbonization significantly; with the speed increasing, the efficiency of decarbonization showed a trend of first decline, then increase and decrease again, and in its selected range, the optimal speed was 2.0 m/s. This study is of significance for the improvement of RTS performance and its decarbonization separation efficiency.

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