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Abstract

Iron-containing natural ores or solid wastes (e.g., red mud) are considered as ideal candidate as oxygen carrier for large-scale chemical looping combustion technology due to their high content of Fe_2O_3 and low cost. However, these oxygen carriers usually show low activity for fuel conversion because of the special structure and components. In the present study, two types of red mud (V-RM with rich Fe_2O_3 and W-RM with rich inert and alkaline components) were combined to modify the structure and the distribution of different components in the red mud oxygen carrier

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