

RESEARCH NOTES

循环流化床密相区内颗粒的横向扩散的研究

杨海瑞, 吕俊复, 刘青, 岳光溪

Department of Thermal Engineering, Tsinghua University, Beijing 100084, China

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摘要 Lateral solid mixing was investigated experimentally in the dense zone of a 900mm×100mm×5.2m rectangular circulating fluidized bed riser. Using heated tracer injection, the lateral solid dispersion was determined by measuring the temperature response at different lateral positions. Furthermore, a one-dimensional dispersion model, which describes the solid mixing in the dense zone, is presented. The experimental results were used to determine the lateral particle dispersion coefficient under various operating conditions. A correlation of dispersion coefficient with bed height, gas velocity, and particle size is also proposed.

关键词 [lateral dispersion coefficient](#) [heated tracer particle](#) [dense zone](#) [circulating fluidized bed](#) [dense zone](#)

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Lateral Solids Mixing in the Dense Zone of a Circulating Fluidized Bed

YANG Hairui, LU Junfu, LIU Qing, YUE Guangxi

Department of Thermal Engineering, Tsinghua University, Beijing 100084, China

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Abstract Lateral solid mixing was investigated experimentally in the dense zone of a 900mm×100mm×5.2m rectangular circulating fluidized bed riser. Using heated tracer injection, the lateral solid dispersion was determined by measuring the temperature response at different lateral positions. Furthermore, a one-dimensional dispersion model, which describes the solid mixing in the dense zone, is presented. The experimental results were used to determine the lateral particle dispersion coefficient under various operating conditions. A correlation of dispersion coefficient with bed height, gas velocity, and particle size is also proposed.

Key words [lateral dispersion coefficient](#); [heated tracer particle](#); [dense zone](#); [circulating fluidized bed](#); [dense zone](#)

通讯作者:

杨海瑞 yanghr00@mails.tsinghua.edu.cn

作者个人主页: 杨海瑞; 吕俊复; 刘青; 岳光溪

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