

传递现象

## 热变温器系统气固反应器内部的温度特性

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**摘要** 以气固反应热变温器系统的反应器为研究对象,通过建立数学模型,计算了反应器内部在反应过程中的温度分布及其随时间的变化,讨论了一些参数对于反应器内部温度分布的影响。结果表明:TC减小、pC增大以及fg减小、pb增大,使反应器内部温升增加、反应器对废热流体的加热功率q增大,而反应器内部的温度不均匀性亦增加。

**关键词** [热变温器](#); [热量利用效率](#); [加热功率](#); [反应速率](#)

分类号

## Temperature profile during gas solid reaction within reactor for heat transformer

### Abstract

Heat transformer with gas solid reaction could be used to upgrade waste heat. In this paper, the transient temperature profiles within the reactor for heat transformer were studied and some basic characteristics of temperature distribution were analyzed with the variation of parameters, such as TC, pC, fg and pb. Through analyzing the temperature distribution profile, it was concluded that with the increase of pC and pb, and decrease of TC and fg, the temperature rise within the reactor and the heating power for waste heat fluid increased, while the temperature distribution became more non-uniform.

**Key words** [heat transformer](#); [heating efficiency](#); [heating power](#); [reacting rate](#)

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