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5 MW低温供热堆挤水器作用的数值分析

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摘要 用三维CFD软件PHOENICS 3.3计算了取消挤水器后5MW低温供热堆(NHR 5)的稳态及非对称运行瞬态工况。分析研究了挤水器的设置在稳态及非对称瞬态工况下对一回路系统的影响。研究表明:设立挤水器对对称稳态工况影响不大,对非对称稳态及瞬态工况有较大影响。

关键词 [低温供热堆](#) [非对称运行](#) [数值分析](#)

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Numerical Analysis of the Effect of Coolant Containers on the 5 MW Nuclear Heating Reactor

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Abstract Three dimensional CFD code, PHOENICS 3.3 is used to simulate the steady state and asymmetric transient of 5 MW nuclear heating reactor (NHR 5) without coolant containers. The influence of the setting of coolant containers on the primary system under steady state and asymmetric transient is analyzed. The result shows that the setting of coolant containers has not distinct effect under symmetric steady state, but has sizeable effect under asymmetric state.

Key words [nuclear heating reactor](#) [asymmetric operating](#) [numerical analysis](#)

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