

反应堆工程

中国实验快堆虹吸破坏装置取钠口结构流体动力学分析

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摘要 中国实验快堆在一回路钠净化系统中设置虹吸破坏装置, 以非能动方式减少该系统发生堆外管道破裂事故的液态钠泄漏量。本文对该装置中取钠口结构的发泡动力效应进行研究, 从流体动力学分析角度证实该装置改进结构取钠口的泄压能力和非能动减少液态钠泄漏量的能力比原结构取钠口的好。

关键词 [中国实验快堆](#) [虹吸破坏装置](#) [取钠口](#) [结构改进](#) [流体动力学](#)

分类号

Hydrodynamics Analysis of Inlet in Anti-siphon Equipment of China Experimental Fast Reactor

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Abstract The anti-siphon equipment is set in the primary sodium purification system of China Experimental Fast Reactor, which is used to passively reduce the sodium leakage when this system suffers any accident of the system pipeline breaks. From the point of view of bubble growing theory, the hydrodynamics analysis for the inlet of this equipment was performed. It is certified that the ability of the improved inlet, which includes depressurization and reducing the leak quantity of liquid, is better than the original one.

Key words [China](#) [Experimental](#) [Fast](#) [Reactor](#) [anti-siphon](#) [equipment](#) [inlet](#) [structure](#) [improvement](#) [hydrodynamics](#)

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