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## 窄缝通道内支撑柱对传热性能的影响

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**摘要** 将计算流体动力学方法应用于窄缝通道内支撑柱对传热性能的影响分析。用CFX程序数值模拟有和无支撑柱两种情况下窄缝通道内的冷却剂流动,通过比较相同热流密度工况下加热壁面出口附近相应峰值点温度来分析支撑柱对通道内冷却剂冷却能力的影响。结果表明:支撑柱对该通道的临界热流密度的影响较小,可在实验中采用支撑柱以防止窄缝通道变形。

**关键词** [窄缝通道](#) [支撑柱](#) [计算流体动力学](#) [上升流](#) [下降流](#) [临界热流密度](#)

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## Effect of Shores on Thermal Performance in Narrow Channel

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**Abstract** The computational fluid dynamics(CFD) evaluation method was applied for analyzing effect of shores on thermal performance in narrow channel. The related numerical simulations of coolant flow in narrow channel with and without shores were performed (using) the CFD code—CFX. The coolant cooling ability of channel was predicted by comparing the relative peak spot temperatures around exit of the heating wall at the same heat flux condition. The results show that the shores have certain effects on critical heat flux of channel, but the effect is rather small as a whole. So they might be adopted in the test.

**Key words** [narrow channel](#) [shores](#) [computational fluid dynamics](#) [up flow](#) [down flow](#) [critical heat flux](#)

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### 扩展功能

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