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## 核供热堆功率调节系统分布式半实物实时仿真人机接口设计

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**摘要** 核供热堆用于低温供热以及海水淡化等负荷跟踪的条件下, 需建立半实物仿真平台来验证其功率调节系统, 其仿真数据量大, 使得单机仿真实验的实时性很难得到保证, 结果的显示和存储均不方便。利用分布式结构建立了半实物的仿真平台和清晰、直观的人机接口, 减轻了模型计算机的负担, 提高了运算速度, 满足了系统实时化的要求; 画面清晰简洁, 方便的指令输入和结果输出使系统的验证更加容易。

**关键词** [核供热堆](#) [功率调节系统](#) [半实物实时仿真](#) [人机接口](#)

分类号

## Man-Machine Interface Design of Real-Time Hardware-in-Loop Simulation System for Power Regulation of Nuclear Heating Reactor

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**Abstract** It is necessary to set up real-time hardware-in-loop simulation system for power regulation of nuclear heating reactor (NHR) because it is used in the load following instance such as sea water desalination and energy source. As the experiment data are so large that it is hard to be real-time all in one computer and to save and show the data. With the distributed configuration, the system was set up having a legible and intuitionist man-machine interface, speeding the model calculation computer and meeting the requirements of power regulation of NHR. Screen clear and concise, easy command input and results output make the system easier to verify.

**Key words** [nuclear heating reactor](#) [power regulating system](#) [real-time hardware-in-loop simulation](#) [man-machine interface](#)

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