

安全与管理

震后核设施性能综合检查与评价

高泉源

苏州热工研究院有限公司, 江苏 苏州215004

收稿日期 修回日期 网络版发布日期:

摘要 5.12汶川大地震后, 为及时评价地震对中国核动力研究设计院所属核设施造成的影响, 采用检查(射线探伤、超声探伤、渗透探伤及水下视频检查等)、试验(功能、性能试验)、分析(抗震分析、断裂分析)以及审查确认等多种方法和手段对中国核动力研究设计院所属核设施进行了综合检查与评价, 这是国内首次对民用核设施进行地震后的综合评价。主要的检查、评价结果及结论为: 在检查范围内未发现汶川大地震对中国核动力研究设计院所属研究堆和临界装置造成损害, 各研究堆和临界装置的安全停堆、冷却及限制放射性释放的三大基本安全功能仍得到保证。同时, 建议继续开展厂址地震动研究工作, 确定厂址地震设计基准; 对应急计划进行修订, 增加专项地震应急预案等。

关键词 [汶川大地震](#) [核设施](#) [检查](#) [分析](#) [评价](#)

分类号

Post-Earthquake Comprehensive Inspection and Assessment of Performances of Nuclear Facility

GAO Quan-yuan

Suzhou Nuclear Power Research Institute Ltd., Suzhou 215004, China

Abstract In order to assess the influences of 5.12 Wenchuan earthquake on the nuclear facilities affiliated with Nuclear Power Institute of China, comprehensive inspection and assessment of those nuclear facilities were performed by different approaches such as inspection (RT, UT, PT and underwater video inspection), testing, analysis and confirmative review. It is the first time that this aspect of work was developed in China. The main inspection results and conclusions show that no damages to the research reactors and critical installations are found in the inspection range, and the three safety functions including safe shutdown, cooling and constrain of radiation release are ensured. It is recommended to continue site earthquake research work, determine site earthquake design base, revise emergency plan and develop special earthquake emergency plan, and so on.

Key words [Wenchuan earthquake](#) [nuclear facility](#) [inspection](#) [analysis](#) [assessment](#)

DOI

通讯作者

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [\[PDF全文\]\(602KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)

参考文献

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中包含“汶川大地震”的相关文章](#)
- ▶ 本文作者相关文章
- [高泉源](#)