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微堆安全监督系统

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收稿日期 1998-9-9 修回日期 网络版发布日期:

摘要 在深圳大学微堆上建立了计算机安全监督系统。通过计算机和有关的探测器,对影响核燃料元件包壳腐蚀和反应堆安全的 pH、电导率和堆水净化柱的 γ 放射性活度等参数进行实时监测。系统包括缓发中子测铀装置,一旦核燃料元件包壳破损,系统将即时发出警报

关键词 [微堆安全监督](#) [包壳破损](#) [放射性污染](#)

分类号 [TL363](#)

Safety Monitoring System of Miniature Neutron Source Reactor

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Abstract The computer safety monitoring system was established for miniature neutron source reactor(MNSR) of Shenzhen University. The system is used for monitoring and measuring the water quality such as pH value and electric conductivity in the reactor core and pool. The system is also used for monitoring and measuring the cladding damage of the nuclear fuel rods. Once the damage happens there will be the delayed neutron emitted by the fission products in the water of the reactor purification system, and the computer safety monitoring system of MNSR will alarm and the reactor will be shutdown immediately. It is very important to protect environment from the radioactive contamination for the MNSR built at city.

Key words [safety monitoring](#) [cladding damage](#) [radioactive contamination](#)

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