

快报

核电设备状态监测与故障诊断系统的研究

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摘要 故障诊断系统可作为先进核电站仪表控制系统的重要辅助工具。本文介绍1种用于核电设备的状态监测及故障诊断系统, 该系统的系统程序用Visual Basic 6.0开发, 并集数据采集、状态监测、故障诊断于一体, 功能完善, 操作使用方便。为了验证该系统的有效性, 在核动力装置模拟器上进行了仿真实验研究。实验结果表明, 系统完全可对核电设备的典型故障进行准确识别。

关键词 [核电设备](#) [状态监测](#) [神经网络](#) [故障诊断](#)

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Research on State Monitoring and Fault Diagnosis System of Nuclear Power Equipment

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Abstract The fault diagnosis system can serve as an important auxiliary tool of advanced instrument and control system of nuclear power plant. This paper introduces a kind of state monitoring and fault diagnosis system for nuclear power equipment. The system whose system program was coded with Visual Basic 6.0 was integrated with functions of data acquisition, state monitoring and fault diagnosis and was robust and easy to operate. In order to confirm the validity of this system, the simulation experiment was carried out on a nuclear power plant simulator. The experimental results show that the system can completely and accurately identify the typical faults of nuclear power equipment.

Key words [nuclear power equipment](#) [state monitoring](#) [neural network](#) [fault diagnosis](#)

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