以太网技术在核辐射监测系统中的应用

Thursday, 16 August 2012 15:06 (12 minutes)

摘要：随着核技术在纵多领域的应用和核电的发展，放射性物质对人类的危害、环境的污染越来越受到人们的关注。核辐射监测系统可对工作场所与环境中的放射性水平进行监测。在监测系统中引入以太网技术，利用以太网的通讯功能将核辐射监测系统中的现场监测点、监控中心与数据库系统有效的连接起来，使得监控人员可在任何具有以太网接口功能的地方实现对现场监测点的控制、数据采集以及传输，在远程数据服务器上实现数据的显示、分析与处理，同时将以太网供电功能引入到监测系统中，对现场监测点提供电力。通过测试，基于以太网的核辐射监测系统使用方便、便于维护，具有一定的实用性与经济性。

关键词：核辐射监测，以太网供电，TCP/IP

Ethernet technology in the nuclear radiation monitoring system

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Abstract：With the application of nuclear technology in many fields and development of nuclear power, the people pay more and more attention to which the radioactive substances are harmful to the human, environmental pollution, the nuclear radiation monitoring system can monitor the levels of radioactivity in the workplace and the environment. The introduction of ethernet technology in monitoring system, the on-site monitoring points, monitoring center and database systems can be connected to each other,the worker can achieve control of monitoring points, data acquisition and transmission in any of the ethernet interface functions, complete data display, analysis and processing in the remote data server, and provide electricity on-site monitoring points in the monitoring system.Acorrding to the test, the nuclear radiation monitoring system which based on ethernet is easy to use and maintain, with a certain degree of practicality and economy.

Keywords: Nuclear radiation monitoring system,Power over Ethernet,TCP/IP

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Session Classification: 第二分会场（核电子学、核医学电子学、计算技术应用）

Track Classification: 计算机