

反应堆工程

可动线圈控制棒电磁驱动线验证试验

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摘要 可动线圈控制棒电磁驱动线是新研制的一种反应堆用驱动线, 靠电磁力驱动控制棒实现反应堆的开堆、停堆和功率调节。为突破其研制过程中的关键技术, 进行了一系列的验证试验。通过原理性能试验, 验证了设备研制的理论基础, 实现了可行性的突破; 通过行程试验和寿命考验, 验证了设备的稳定性、可靠性, 并得到了设备的运行特性参数; 通过抗震试验, 验证了设备在极端条件下的安全功能。性能试验得到的试验数据, 可为该驱动线的安装、调试、安全运行提供依据。

关键词 [控制棒](#) [电磁](#) [驱动机构](#) [验证试验](#)

分类号

Verification Test of Movable Magnetic Coils Control Rod Drive Line

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Abstract The movable magnetic coils control rod drive line, a new kind control rod drive line for reactors, regulates and controls reactor power by driving control rods with electromagnetic force. A series of verification tests were conducted to break through the key technology in development process. The theoretical basis of equipment development was verified by the principle test, making a breakthrough in the feasibility. The stroke test and life test not only verified the stability, reliability of the equipment, but also got its operation characteristic parameters. The anti-seismic test verified the security function in extreme conditions. The verification test data provide reference for the installation, regulation and safe operation of the drive line.

Key words [control rod](#) [magnetic drive](#) [mechanism](#) [verification](#) [test](#)

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