



有限元分析在特高压换流阀抗震设计中的应用

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摘要: 建立换流阀有限元模型建立, 运用有限元分析方法对云广工程换流阀进行模态分析, 结果表明: 采用悬吊结构设计的换流阀在地面水平加速度峰值 $0.25g$, 地面垂直加速度峰值 $0.15g$ 的地震波作用下是安全可靠的, 云广工程换流阀设计满足抗地震要求。

关键词: 换流阀; 有限元分析; 抗震设计

Application of FEA in Seismic Design of UHV Thyristor Valves

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Abstract: Based on the model established in this paper for the thyristor valve, the mode analysis on the thyristor valve of Yunnan-Guangzhou UHVDC project is carried out with Finite Element Analysis method, and the results show that the valve with suspendin structures is on the safe side under the action of earthquake wave with $0.25g$ of maximum horizontal acceleration and $0.15g$ of maximum vertical acceleration, and thus the design of the thyristor valve of Yunnan-Guangzhou UHVDC project meets antiseismic requirement.

Key words: thyristor valves; Finite Element Analysis; antiseismic design

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