

重庆地区500kV变电站内工频电磁场分析

徐禄文¹, 李永明², 刘昌盛³, 侯兴哲¹, 俞集辉²

1. 重庆市电力科学试验研究院, 重庆市 沙坪坝区400015; 2. 输配电装备及系统安全与新技术国家重点实验室(重庆大学), 重庆市 沙坪坝区400044; 3. 重庆市电力公司, 重庆市 沙坪坝区400014

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摘要

研究了重庆地区500 kV变电站内的工频电磁场分布及特点。针对重庆地区日益增多的500 kV高压变电站, 研究了该类型变电站内工频电磁环境对职业暴露的影响, 对重庆地区500 kV高压变电站内各区域和设备周围的工频电、磁场进行了细致测量并归纳总结了测量结果, 对电磁场较强的重点区域进行了分析。根据测量得到的电磁场分布情况, 从职业安全角度出发, 提出了500 kV高压变电站内的安全生产应注意事项。在500 kV高压变电站的安全管理、新变电站的合理布局和设计、新设备的选型等方面提出了合理化建议, 为电力企业实施绿色环保工程提供了科学依据。

关键词 [500 kV变电站](#); [工频电场](#); [工频磁场](#); [职业暴露限值](#)

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Analysis on Power Frequency Electric and Magnetic Fields within 500kV Substations in Chongqing Area

XU Lu-wen¹, LI Yong-ming², LIU Chang-sheng³, HOU Xing-zhe¹, YU Ji-hui²

1. Chongqing Electric Power Test and Research Institute, Shapingba District, Chongqing 400015, China; 2. State Key Laboratory of Power Transmission Equipment & System Security and New Technology (Chongqing University), Shapingba District, Chongqing 400044, China; 3. Chongqing Power Corporation, Shapingba District, Chongqing 400014, China

Abstract

The distributions and features of power frequency electromagnetic fields within 500kV substations in Chongqing area are studied. In view of gradually increasing of 500kV substations in Chongqing area, the impacts of power frequency electromagnetic environment within 500kV substations on professional exposure are researched. For this reason, the power frequency electric and magnetic fields in the regions within 500kV substations and in the locations around the power equipments are carefully measured and the measured results are generalized and summarized, and the special regions with higher electric and magnetic field intensity are deeply researched. According to the measured distributions of electromagnetic fields and from the standpoint of occupational safety, the matters needing attention for safety production within 500kV substations are pointed out. Several rationalization proposals concerning safety management of 500kV substations, reasonable disposition and design for new 500kV substations to be constructed and the selection of new substation equipments are suggested.

Key words [500 kV substation](#); [power frequency electric field](#); [power frequency magnetic field](#); [professional exposure limit](#)

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通讯作者

作者个人主页 徐禄文¹; 李永明²; 刘昌盛³; 侯兴哲¹; 俞集辉²

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