



±800 kV 直流输电线路分裂导线表面

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摘要: 比较了马克特-门格尔法、模拟电荷法和逐步镜像法等3种计算导线表面场强方法的计算误差, 应用模拟电荷法计算了±800 kV 直流输电线路分裂导线表面电场强度。结果显示, 特高压直流输电线路分裂导线表面电场强度受分裂数、导线截面、分裂间距、极间距的影响较明显, 受导线高度的影响较小。

关键词: 特高压直流输电; 分裂导线; 表面电场强度; 模拟电荷法

Calculation of Surface Electric Field along ±800 kV DC Transmission Lines with Bundled Conductors

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Abstract: Comparing the calculation errors among 3 calculation methods for the surface electric field, this paper applies charge simulation method to calculate the surface electric field along ±800 kV DC transmission lines with bundled conductors. The results show that the surface electric field along UHVDC transmission lines is obviously impacted by the number of the bundles, the conductor cross-section, the bundle spacing and the polar distance, but less by the conductor height.

Key words: UHVDC; bundled conductor; surface electric field; charge simulation method

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