

[1]赵威,陈俊旗,王伟.输电塔三维精确有限元模型[J].自然灾害学报,2010,06:67-75.

ZHAO Wei,CHEN Jun-qi,WANG Wei.A precise three-dimentional finite element model of transmission tower system[J].,2010,06:67-75.

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## 输电塔三维精确有限元模型 [\(PDF\)](#)

《自然灾害学报》[ISSN:/CN:23-1324/X] 期数: 2010年06期 页码: 67-75 栏目: 出版日期: 2010-08-09

Title: A precise three-dimentional finite element model of transmission tower system

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关键词: [土体-基础-输电塔-线体系](#); [动力特性](#); [时程分析](#)

Keywords: [soil-foundation-transmission tower-line system](#); [dynamic behavior](#); [time-history analysis](#)

分类号: TU352

DOI: -

文献标识码: -

摘要: 以呼伦贝尔-辽宁之间的500kV直流输电线路的电塔体系为背景,采用ANSYS软件建立了土体-基础-塔-线体系的精确有限元模型,并对其进行了动力特性及其在风荷载作用下的动力反应分析,比较了考虑和不考虑基础和土时输电塔动力反应的差异,讨论了基础和土体对输电塔的影响,并分析了产生此种变化的原因。

Abstract: In this paper,an accurate finite element model for the soil-foundation-transmission tower-line system based on the 500kV transmission line system from Hulunbeier to Liaoning was presented.An anlysis of dynamic behaviors and wind-induced response was carried out.This paper compares the differences of dynamic response between the models with and without the foundation and soil,discusses the effects of foundation and soil on transmission tower,and analyzes the factors contributing to the differences.

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备注/Memo: 收稿日期:2009-10-21;改回日期:2010-7-23。

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