安义砖厂变电站设计

摘　　要

随着我国经济的不断进步，我国在电力行业的投入也越来越大，电力行业得到快速发展，在发展中也存在着诸多需要改善的问题，人们生活的各个方面用电量的不断增加给电力行业带来不小得压力，这就对变电站的设计水准和参数设置的提出了更高的要求，也对变电站设计的安全性、适用性、经济性提出了更高的挑战。

作为电力系统重要组成部分的变电站的稳步发展，也将对电力系统的稳定、快捷、安全、经济性产生很大影响，在连接用户和发电厂之间扮演着重要的作用。作为中间环节，电能的分配和转换是它的主要功能。

由原始材料，原始各厂区所需的供电数据编绘该厂变电站的主接线图；变压器参数的选取主要凭借负荷计算所产生的数据。变电站的一次设备的选择和校验通过短路电流来确定。也由短路电流的结果来设计防雷保护和接地设备的选择。

本次砖厂变电站毕业设计是大学所学电力系统等知识的一次熟练应用和升华，将大学所学知识应用到具体的变电站的设计中，加深对知识的理解也扩展了对大学外自己所学专业的认知，也是对“电力系统分析、工厂供电”所学的相关理论知识、专业知识如何通过实践检验出掌握的程度的一种考量。

关键词：变电站；负荷计算；短路电流计算；防雷接地装置

ABSTRACT

Due to China's economic prosperity, the proportion of investment in the power industry is also gradually increasing, the power industry has been rapid development, there are many problems in the development, the increasing power consumption in all aspects of people's lives brings great pressure to the power industry, which puts forward higher requirements for substation design level and parameter setting, and also puts forward higher challenges to substation design safety, applicability and economy.

The rapid and steady development of the substation will also bring about changes in the electricity environment and quality of the whole country and make the power system more and more perfect. The steady development of substations also makes the supply and demand relationship between users and power plants become balanced. Between users and power plants, the distribution and conversion of electric energy by substations is the most important.

This is the design of the substation in the brick factory, the main wiring diagram of the substation is drawn from the original data of the substation; the main parameters of the main transformer are selected from the value calculated by the load. The relevant value of short circuit current to select and check the primary equipment, the same choice of lightning protection equipment and grounding device.

The graduation design of the brick factory substation is a skilled application and sublimation of the power system and other knowledge learned by the university. Applying the knowledge learned by the university to the design of the specific substation, deepening the understanding of the knowledge also expands the cognition of the major learned outside the university, and is also a consideration of the relevant theoretical knowledge and professional knowledge of "power system analysis, factory power supply ", how to test the degree of mastery through practice.

Key words: Substation; Load calculation; Short circuit current calculation; Lightning protection grounding device

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