成都市某模具厂供配电系统设计

摘要: 通俗来说，工厂供电指的就是工厂所需要的电能的传输和分配。在工厂进行生产的整个过程中，电能作为最主要的动力来源，因为电能非常容易转换成为其它形式的能量，并且传输和分配也方便快捷，所以电能已经成为不可或缺的能源，社会的各个方面都有电能的存在，尤其是在工业生产中，电能更是极其重要的组成部分。

供配电系统是现代工厂不可或缺的一部分，它关系到整个工厂是否可以正常地进行生产工作，因此几乎所有工厂都十分看重供配电系统的设计。工厂所使用的供电系统主要是由降压变电所，低压输电线路，高压输电线路以及许多用电设备所组成的。对工厂的供配电系统进行设计，其实就是依据所有车间的负荷大小及其特性、在生产制造中对负荷的要求和规定，还要考虑到负荷的实际位置，再联系国家和各个地方的供电情况，解决好各部门配电安全可靠和经济技术问题。在这当中，需要考虑的内容大概分为以下几个方面:对供配电系统进行负荷计算（每个车间的和总的），功率因数的改善（提高功率因数），进行变压器数量和容量的选择，主接线的设计（画出主接线图），短路电流及其计算，导线及母线的选择等。

关键词：供配电系统；负荷计算；变压器；短路电流

Design of power supply and distribution system for a mould factory in Chengdu

Abstract: In Layman's terms, plant power refers to the transmission and distribution of electrical energy needed by a plant. Electricity is the main source of power throughout the production process because it is very easy to convert into other forms of energy and is easy to transmit and distribute, therefore, electric energy has become an indispensable energy, all aspects of society have the existence of electric energy.

Power Supply and distribution system is an indispensable part of modern factory, which is related to whether the whole factory can work normally, so almost all factories attach importance to the design of power supply and distribution system. The power supply system used by the factory is mainly composed of step-down substation, low-voltage transmission line, high-voltage transmission line and many power equipment. The design of the plant's power supply and distribution system is based on the load size and its characteristics of all workshops, the load requirements and requirements in production and manufacturing, and the actual location of the load, then contact the state and the local power supply, to solve the security and reliability of power distribution departments and economic and technological issues. In this process, we should consider the following aspects: load calculation of power supply and distribution system (the sum total of each workshop), improvement of power factor (increase of power factor), selection of number and capacity of transformer, main wiring design (draw the main wiring diagram) , short-circuit current and its calculation, conductor and bus selection.

Key words: Power supply and distribution system, Load calculation, Transformer, short-circuit current