

# Strong Current Engineering Technology in Building Electrical Installation

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**Abstract:** This article provides an in-depth analysis and exploration of strong current engineering technology in building electrical installation, in order to provide communication and discussion for relevant personnel. At the same time, it also hopes that valuable suggestions from colleagues can be put forward in a timely manner.

**Keywords:** Building Electrical Installation; Strong Current Engineering Technology

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## Introduction

The strong current engineering technology in building electrical installation refers to the technical field responsible for transmitting and supplying high-power electrical energy in the electrical system of buildings. So, strong current engineering technology plays a crucial role and positive impact in building electrical installation, which cannot be ignored. It involves many aspects such as power supply, distribution, lighting, communication, safety, etc. It will have a direct impact on the normal operation and use of buildings. Therefore, managers and corresponding workers of construction enterprises should attach great importance and attention to the technical operations of strong current engineering in building electrical installation, pay attention to and implement effective control of key and weak links in the construction process, ensure the effectiveness and scientificity of the construction plan formulated, and carry out reasonable norms of corresponding construction behavior, in order to effectively ensure the quality of strong current construction, The Factor of safety and stability coefficient of installation and construction were improved in time, providing strong support and effective thrust for the healthy development of the whole construction industry in the future <sup>[1]</sup>.

## 1. Preparation work for early installation of building electrical construction

Before conducting electrical installation in buildings, a series of preparatory work is required, mainly including electrical construction design and planning, drawing review, and equipment selection. Firstly, electrical construction design and planning. Electrical design and planning should be carried out for buildings, further clarifying key information such as the location of power sources, power supply methods, organization of electrical equipment, and relevant specifications for electrical equipment; Secondly, the joint review of drawings is well carried out. Before the formal construction phase, the relevant construction units shall complete the joint review of electrical engineering drawings in advance, that is, the joint review of drawings shall be completed according to various information in the actual situation, such as power unlimited structure, electrical engineering design parameters, etc. Generally speaking, the joint review of design drawings should include details such as equipment model, engineering construction technology, etc. Among them, it should be noted that the design drawings provided by the construction unit must ensure comprehensiveness and authenticity, in order to timely prevent the occurrence of quality problems in the subsequent construction process and provide strong guarantee and reliable information support for the smooth progress of subsequent construction work; Finally, the reasonable selection of equipment. Normally, it is necessary to purchase materials and prepare construction equipment to ensure the completeness of the materials and equipment required for construction. In this process, the reasonable selection of equipment should be based on relevant construction design and quality standards, such as equipment specifications, equipment models, etc., and the

management of the three certificates should be completed to ensure that the selected equipment and materials better meet the corresponding needs and quality requirements, and to better complete the preparation work for the materials and equipment required before construction.

## **2. Further clarification of electrical load standards**

The strong current engineering technology in building electrical installation needs to determine the electrical load standard based on the electricity demand of the building. The so-called electrical load standard refers to the corresponding standards of electrical energy and power required for construction projects. Therefore, the corresponding staff should comprehensively consider multiple factors such as the type, purpose, and scale of the construction project, and further clarify the electrical load standards to ensure that the electrical system can meet the actual electricity needs of the construction project. At the same time, attention should also be paid to and measures taken to prevent potential unexpected problems. Therefore, it is necessary to comprehensively consider potential unexpected situations and complete the design and formulation of construction preparation plans based on the corresponding situations. Only in this way can we ensure the efficient development of corresponding solutions in case of emergencies, solve and overcome the problems encountered in a shorter time, and effectively ensure the effectiveness and effectiveness of high-pressure construction, enabling the corresponding work to be completed within a specific time. In addition, it is necessary to effectively implement unified high-voltage construction standards and further clarify the corresponding responsibilities of each construction personnel through reasonable planning of quality control responsibilities, so that each employee can fulfill their duties more diligently and ensure the smooth progress of engineering construction.

## **3. Reasonable design of substation system**

The strong current engineering technology in building electrical installation involves the design of substation systems. Among them, the substation system refers to the distribution system that supplies electrical energy from the high-voltage transmission line to the interior of the building after passing through a transformer to reduce voltage. It can be seen that a reasonable design of the substation system can ensure the stability and safety of the power supply inside the building. Therefore, in order to ensure the quality of strong current construction, it is necessary to carry out a reasonable design of the substation system, thereby completing the effective design of strong current modules, and implementing more scientific and targeted solutions and measures, in order to achieve more ideal results, promote the development of strong current construction, and provide strong support and effective thrust for the normal operation and daily use of buildings. On the one hand, in the early stage of carrying out strong current construction, further clarification of key points in the design drawings should be completed based on corresponding standards, precautions, and equipment requirements, and accurate marking of equipment electricity usage should be done to effectively improve the applicability and feasibility of construction design drawings; On the other hand, during the formal construction process of the construction project, the corresponding staff should carry out the corresponding construction according to the provided drawings, further strengthen the effective control and management of the construction key points, and effectively ensure the quality of the strong current construction, laying a solid foundation for the good development of subsequent work.

## **4. Strengthening quality supervision efforts**

To ensure the full utilization of the value of strong current construction site management work, it is necessary to pay attention to and implement further strengthening of quality supervision, in order to effectively ensure the effectiveness and effectiveness of management work, and timely prevent the frequent occurrence of subsequent adverse problems. In terms of specific operations, corresponding management personnel and workers can start from two aspects, namely the management of strong current construction sites and the management of leakage protection. For the management of strong current construction sites: Firstly, during the process of building electrical installation and strong current construction, corresponding personnel need to carry out anti-corrosion work for individual welding points according to the corresponding standards for the installation of distribution boxes and lightning protection position systems, in order to timely avoid the occurrence of

individual adverse problems and provide strong guarantee for the smooth progress of subsequent construction links. At the same time, in this link, we should also pay attention to and implement the continuous strengthening of the security of the lightning protection Earthing system; Secondly, the corresponding staff should analyze and explore the construction technology and process based on the actual situation and progress of the construction during the construction process of building electrical installation strong electricity, in order to ensure the effective implementation of strong electricity construction quality supervision and management work, and ensure the smooth progress of strong electricity construction site management work. Regarding the further strengthening of leakage protection management: firstly, in order to timely prevent the occurrence of pipeline deformation problems, corresponding personnel need to pay attention to and implement the reduction of the number of elbows during the construction process; Secondly, in order to ensure the timely elimination of cracks, PVC pipes should be constructed as short as possible to provide strong guarantees for the integrity of the interface.

## **Conclusion**

In summary, the strong current engineering technology in building electrical installation is an important link in ensuring the safety and reliability of building power supply. Therefore, in the context of the development of the new era, managers of construction enterprises should promptly recognize the key role and important value of strong current engineering technology, and pay attention to and implement effective cooperation and corresponding agreements with staff, professional training, and building quality requirements management, in order to ensure timely resolution of problems or confusion encountered, and make building electrical structures safer Stable and normal operation, in order to make greater contributions to the quality and efficiency of building electrical installation, and vigorously promote the forward pace of the construction industry towards future healthy development.

## **References**

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