

Inspections and Testing in Overhead Transmission Line (OHL) Civil Works as a Part of Quality Control and Quality Assurance

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ABSTRACT

Quality control and quality assurance play a vital role in the successful execution of overhead transmission line (OHL) civil works. Inspections and testing are a part of quality control and quality assurance in OHL civil works. OHL projects can ensure the delivery of high-quality infrastructure that meets safety, reliability, and performance requirements. Implementing testing and inspections throughout the construction process will contribute to efficient transmission of power, benefiting all stakeholders.

Keywords: Inspections and testing, OHL, QC&QA

I. INTRODUCTION

Quality control and quality assurance play a vital role in the successful execution of overhead transmission line (OHL) civil works. With the ever-increasing demand for reliable and efficient power transmission, it is imperative to ensure that OHL projects meet stringent quality standards. This article delves into the importance of inspections and testing as a part of quality control and quality assurance in OHL civil works, highlighting key considerations to enhance outcomes.

Quality Control and Quality Assurance:

Quality control (QC) encompasses the processes and activities employed to monitor and control the construction activities of an OHL project. It involves on-site inspections, material testing, adherence to specifications, and compliance with relevant codes and standards. Quality assurance (QA) focuses on the

systematic and planned activities implemented to ensure that the project meets the specified requirements.

Key Elements of QC&QA OHL Civil Works:

- Documentation and Specifications
- Pre-construction Planning
- Supplier and Contractor Selection
- Inspections and Testing
- Quality Audits
- Training and Skill Development

Inspections and Testing:

Regular inspections and testing throughout the construction process help identify any deviations from specifications or quality standards. This includes checks on materials, foundation integrity, structural element and grounding systems.



Site Preparation



Pile Driving



Soil Investigation



Pile Concreting



Surveying



Temporary Casing



Steel Reinforcement



Pile Cap



Compression Testing at Lab



Routine Testing at Lab



Quality Inspection of Materials



Pile Integrity Test at Site

Benefits of Effective QC&QA:

- a. Ensuring Safety and Reliability
- b. Long-term Performance
- c. Regulatory Compliance
- d. Cost Savings

II. CONCLUSION

Quality control and quality assurance are indispensable components of any civil work. By implementing robust processes, adhering to specifications and conducting proper testing and thorough inspections, OHL projects can ensure the delivery of high-quality infrastructure that meets safety, reliability and performance requirements. Emphasizing the importance of quality throughout the construction process will contribute to the sustainable and efficient transmission of power, benefiting all stakeholders.

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