

## Ladders and Other Equipment - General

Falls from ladders remain a leading cause of workplace injuries and fatalities in construction. At NCC T&D, ensuring the proper selection, use, and maintenance of ladders and other equipment is critical to worker safety in substations, overhead transmission lines, and underground cable projects. This section outlines the general safety requirements, responsibilities, and compliance measures necessary to prevent ladder-related incidents.

### Regulatory and Safety Standards

In Saudi Arabia, the use of ladders and related equipment must comply with national HSE regulations and client-specific safety standards, including those of Saudi Electricity Company (SEC) and Saudi Aramco (SA). These regulations require:

- Ladders and equipment to be free from defects and capable of supporting all intended loads.
- Compliance with manufacturer guidelines for design, construction, and maintenance.
- Proper storage and use to prevent electrical hazards and other risks.
- Provision of training, supervision, and fall protection measures for workers using ladders at heights.

### General Requirements for Ladders and Equipment

To minimize risks and maintain a safe working environment, all ladders, vehicles, machinery, tools, and equipment must:

- Be regularly inspected and maintained in a condition that does not endanger workers.
- Not be used if they are defective, hazardous, or undergoing repairs (unless necessary for maintenance procedures).
- Be operated in strict compliance with manufacturer guidelines and safety manuals.
- Be properly stored and positioned to avoid accidental contact with energized electrical equipment or conductors.
- Be rated for industrial use, with ladders meeting at least Grade 1, Grade 1A, or Grade 1AA standards (it depends on the task).

### NCC T&D Project Leaders' Key Responsibilities

Project leaders must implement and enforce ladder and equipment safety requirements across all NCC T&D worksites. Their responsibilities include:

#### Ensuring Compliance with Safety Regulations:

- Verify all ladders and equipment meet NCC T&D safety standards.
- Conduct periodic audits and corrective actions.

#### Supervising Ladder and Equipment Use:

- Ensure workers follow proper setup, storage, and operating procedures.

#### Providing Training and Awareness:

- Conduct training programs, including Working at Heights for workers using ladders with fall protection systems.

#### Monitoring Fall Protection Measures:

- Enforce the use of personal fall protection systems when working at heights.

### Workers' Responsibilities

All workers must comply with ladder and equipment safety protocols, including:

- Conducting pre-use inspections to identify and report defects.
- Ensuring safe positioning and securing of ladders before use.
- Avoiding use of ladders in extreme weather conditions or near electrical hazards.

- Using fall protection systems when required.
- Following manufacturer instructions and NCC T&D safety guidelines at all times.

#### **Additional Considerations for NCC T&D Projects**

Given the complexity of NCC T&D projects, additional safety measures must be implemented:

- Ladders near electrical installations: Only non-conductive ladders (fiberglass) should be used.
- Weather Conditions: Ladders must not be used in strong winds, rain, or extreme heat, which can affect stability.
- Load Capacity: Workers must ensure ladders are rated for the combined weight of personnel, tools, and materials.
- Supervision and Access Control: Project managers must enforce restricted access to ladder work areas.

#### **Key Takeaways**

- Ladders and equipment must be defect-free, properly maintained, and used as per safety guidelines.
- Project leaders are responsible for training, supervision, and enforcing safety measures.
- Workers must conduct pre-use inspections, secure ladders, and follow fall protection protocols.
- Compliance with Saudi HSE regulations and SEC/SA standards is mandatory for all NCC T&D projects.

For more information, refer to NCC T&D's relevant IMS procedures or consult our HSE Department for expert guidance and training resources aligned with Saudi Arabian regulatory requirements.