

Personal Protective Equipment – Construction Site Uniforms (General Workwear, Arc-Rated Uniforms, and High-Visibility Vests)

At NCC T&D, workwear uniforms plays a vital role in ensuring worker safety, comfort, and professionalism. Given the Saudi Arabia workplace environment climate and operational hazards on construction sites, all personnel must adhere to specific uniform whenever required.

General Workwear – NCC T&D Requirements

Prohibited Clothing

- Short-sleeve shirts and shorts are strictly prohibited on all NCC T&D construction sites to protect workers from sun exposure, heat stress, abrasions, and other potential hazards.

Workwear Standards for Site Offices and Non-Electrical Hazard Zones

- Long-Sleeved Shirts: Made of durable, breathable fabric (cotton blends, moisture-wicking synthetics), preferably light-colored for heat reflection.
- Long Pants: Durable work trousers providing adequate protection against abrasions and site hazards. Reinforced knees are recommended for additional protection.

Special Considerations for Saudi Arabia workplace environment climate

- Heat Management: Lightweight, breathable fabrics are essential. Ventilated designs, cooling vests, and hydration strategies should be implemented, especially during peak summer months.
- Sun Protection: Long sleeves and pants provide fundamental sun protection. Wide-brimmed hats, neck flaps, and sunscreen must be available to workers exposed to direct sunlight.
- Cultural Sensitivity: Clothing should align with local customs regarding modesty while ensuring full safety compliance.
- Hydration: NCC T&D must provide accessible potable water and enforce hydration breaks to prevent heat-related illnesses.

Arc Flash Protective Clothing – NCC T&D Requirements

Arc flash hazards are a significant risk in electrical work. NCC T&D mandates arc flash protective clothing for all personnel working in areas with potential arc flash exposure.

Key Protective Features

- Flame-Resistant Material (FRC): Garments must be inherently flame-resistant or treated to meet recognized international safety standards (e.g., NFPA 70E, IEC 61482) and applicable Saudi Arabian electrical safety regulations.
- Arc Rating (cal/cm²): The arc flash suit's rating must align with the risk assessment of the work being performed i.e. CAT 2, Cal 12.
- Layering System: Protective layering may be required based on the energy level of potential arc flashes.
- Complete PPE System: Arc flash protection includes:
 - FR hood with face shield or balaclava
 - Arc-rated gloves
 - Arc-rated footwear
 - Properly rated coveralls or multi-layer arc flash suits

When Required

- Arc flash suits are mandatory for energized electrical work, including switching, testing, and maintenance of electrical equipment where an arc flash hazard is present.
- PPE selection must align with the results of an arc flash risk assessment.

High-Visibility Vests – NCC T&D Requirements

High-visibility clothing is crucial for worker safety in environments involving vehicle traffic, heavy equipment, and low-visibility conditions.

Key Features

- Fluorescent Colors: Vests must be high-visibility yellow, orange, or green.
- Retroreflective Strips: Vests must have reflective materials that comply with international safety standards.
- Classification: Vests must meet the appropriate class based on risk level:
 - Class 1: Low-risk areas (e.g., general site access).
 - Class 2: Medium-risk environments (e.g., near moving equipment).
 - Class 3: High-risk areas (e.g., roadways, night work).

Standards Compliance

- High-visibility vests must meet ANSI/ISEA 107 or equivalent standards recognized by SASO in Saudi Arabia.

When Required

- Workers operating in or near roadways or vehicular traffic.
- Workers operating heavy equipment or working near mobile machinery.
- Personnel working in low-light conditions or areas with obstructed visibility.
- Any task requiring enhanced visibility for accident prevention.

Key Takeaways

- HSE Risk controls: Proper workwear minimizes risks related to heat, sun exposure, electrical hazards, and visibility.
- PPE Compliance: All personnel must wear required uniforms, arc flash suits, and high-visibility vests as per NCC T&D guidelines.
- Training & Awareness: Workers must be trained on the selection, use, and maintenance of PPE.
- Enforcement: Supervisors must ensure PPE policies are strictly followed at all times.

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