



# **HSE Work at Height Safety Management Procedure**

## **Document No.: CLADDING-HSE-PD-35**

### **Chapter 1 General Provisions**

#### **Article 1 Purpose**

To standardize the HSE (Health, Safety and Environment) management of work at height in the Company, prevent accidents such as falls from height and object strikes, safeguard the life safety of operators, the Company's property safety and the safety of the operation environment, and ensure the compliance and controllability of work at height in links including warehouse shelf maintenance, equipment repair, equipment loading/unloading, and scaffolding erection/dismantling, this procedure is formulated in accordance with national laws, regulations and requirements of superior units.

#### **Article 2 Basis**

This procedure is formulated in accordance with laws, regulations and institutional documents including the *Work Safety Law of the People's Republic of China*, *Fire Protection Law of the People's Republic of China*, *Classification of Work at Height* (GB/T 3608-2008), *Technical Code for Safety of Work at Height in Construction* (JGJ 80), *Regulations on the Training, Assessment and Management of Special Operation Personnel*, *PIPING SYSTEM PTE LTD HSE Management System Requirements*, *Work at Height Safety Management Specification*, *General Principles for Fire Safety Management of Warehousing Premises*, *HSE Work Permit Management Regulations* and *HSE Emergency Preparedness and Response Management Procedure*.

#### **Article 3 Scope of Application**

1. Application Scenarios: This procedure applies to all work at height with a fall height reference plane of 2 meters or above in the Company's production and operation areas, including but not limited to:
  - Warehouse Areas: Heavy material shelf inspection, material organization on shelf tops, warehouse ceiling maintenance;
  - Equipment Repair Areas: Top inspection of large pipeline equipment, repair of high-altitude components of equipment, high-altitude installation work;

- Loading/Unloading Operation Areas: Container loading/unloading platform operations, high-altitude auxiliary fixing for large equipment hoisting;
  - Special Operations: Scaffolding erection and dismantling, roof/wall panel maintenance, suspended work, cross work;
  - Other Areas: Office building/warehouse exterior wall maintenance, outdoor pipeline erection.
2. Applicable Objects: The Company's in-house operators, contractors (outsourced units) and third-party personnel entering the operation areas; it covers the entire process of work at height application, approval, implementation, supervision and acceptance.

## **Article 4 Management Principles**

1. "Risk Classification and Differentiated Control": Classify work grades based on operation height and environmental risks, and implement corresponding approval authority and safety measures;
2. "Safety First, Prevention First": Fully identify risks of falls, object strikes and electric shocks before work, and implement protective measures in advance;
3. "Who is in Charge, Who is Responsible": The department to which the operation area belongs bears the main responsibility, and operators and safety supervisors are directly responsible for on-site safety;
4. "Closed-Loop Management": Keep traces traceable throughout the process, handle abnormal situations promptly, and conduct acceptance and archiving after work.

## **Chapter 2 Management Responsibilities**

### **Article 5 Responsibilities of the HSE Management Department (Quality, Health, Safety and Environmental Department)**

1. Formulate and revise this procedure and supporting documents (permit templates, risk analysis forms, safety checklists), and supervise implementation;
2. Review special work at height plans (such as suspended work and cross work), be responsible for the final approval of special-grade and first-grade work at height, and verify the compliance of the approval process for second-grade work;
3. Organize HSE training (including training for special operation personnel and emergency rescue) and conduct special inspections on work at height;
4. Take the lead in investigating accidents related to work at height, analyze causes, formulate corrective measures and establish accident files;
5. Supervise the compliance of protective equipment (safety harnesses, safety nets, scaffolding) to ensure compliance with national standards.

## **Article 6 Responsibilities of Departments in Charge of Operation Areas**

1. Warehouse Management Department: Responsible for applying for work at height in warehouse areas, clearing obstacles under the operation site, and confirming that shelf load-bearing meets requirements;
2. Equipment Management Department: Responsible for applying for equipment repair and scaffolding erection/dismantling work, providing safety parameters of height-access equipment, and ensuring that platform/scaffolding load-bearing meets standards;
3. Loading/Unloading Management Department: Responsible for applying for loading/unloading platform operations, coordinating operation time (avoiding loading/unloading peaks), and inspecting the integrity of platform protective railings and anti-slip mats;
4. Each department designates a safety officer to review risk analysis forms, confirm operation conditions and supervise on-site implementation.

## **Article 7 Responsibilities of the Outsourcing Management Department**

1. Review the qualifications of contractors (work at height permits, operators holding special operation certificates) and sign HSE agreements;
2. Organize pre-entry training for contractors (Company regulations, area risk points) and retain training records;
3. Assign dedicated personnel to supervise contractors' work throughout the process and have the right to stop non-compliant operations.

## **Article 8 Responsibilities of the Human Resources Department**

1. Be responsible for the recruitment of work at height personnel: review qualifications (at least 18 years old, holding valid special operation certificates), and organize pre-employment and annual physical examinations (excluding occupational contraindications such as hypertension, heart disease and epilepsy);
2. Cooperate with the HSE Department in conducting training and incorporate HSE assessment into performance evaluation;
3. Arrange work shifts reasonably to avoid fatigued work and protect labor rights and interests.

## **Article 9 Responsibilities of Personnel Related to Work at Height**

1. Work Supervisor (Applicant):

- Submit work applications and provide the *Work at Height Permit, Risk Analysis Form and Safety Measures Plan*;
- Organize risk identification and assessment, and implement protective measures (such as scaffolding erection and warning zone setting);
- Designate qualified safety supervisors, coordinate the work process and handle abnormal situations promptly.

#### 2. Approver:

- Review the necessity of work at height (whether there is a ground alternative plan);
- On-site verify the implementation of safety measures;
- Issue work permits, specify validity periods, supervise the work process, and revoke permits if conditions change.

#### 3. Operator:

- Work with valid special operation certificates and confirm the validity of permits;
- Be in good health (no occupational contraindications) and correctly use protective equipment (double-hook safety harnesses used with high attachment and low use, anti-slip shoes, safety helmets);
- Work in accordance with the plan: climb along designated channels (maintain three-point contact, no hand-held items), place tools/materials in tool bags (no throwing or catching), and strictly prohibit expanding the operation scope;
- Immediately stop work and evacuate to a safe area if abnormalities are found (platform shaking, protective failure).

#### 4. Safety Supervisor:

- Be qualified through special training and stay on duty throughout the work process (no leaving or wandering between posts);
- Inspect protective equipment and platform stability before work, and set up warning zones;
- Communicate with operators regularly during work, monitor environmental changes (such as wind force, illumination), and stop violations;
- Activate emergency plans and call for rescue in case of emergencies.

## Chapter 3 Classification of Work at Height

### Article 10 Classification Standards (Based on Fall Height and Risks)

#### 1. Special-Grade Work at Height:

- Operation height  $h \geq 30$  meters;
- Work in harsh environments (wind force  $\geq$  Level 6, thunderstorms, heavy fog, high temperature  $\geq 35^{\circ}\text{C}$ /low temperature  $\leq -10^{\circ}\text{C}$ );

- Work in special dangerous places (such as above flammable materials, near high-pressure pipelines);
- Control Requirements: Submit applications 24 hours in advance. The approval process is Work Supervisor → Department Head → HSE Department → Company Principal Leader (or in-charge Leader).

### 2. First-Grade Work at Height:

- Operation height 15 meters  $\leq h < 30$  meters;
- Work in complex environments (such as cross work, night work);
- Control Requirements: Submit applications 12 hours in advance. The approval process is Work Supervisor → Department Safety Officer → Department Head → HSE Department.

### 3. Second-Grade Work at Height:

- Operation height 2 meters  $\leq h < 15$  meters;
- Routine work (such as low-level shelf inspection, loading/unloading platform operations);
- Control Requirements: Submit applications 4 hours in advance. The approval process is Work Supervisor → Department Safety Officer → Department Head.

## Article 11 Classified Control Requirements

Work Grade	Advance Application Time	Approval Process	On-Site Control Requirements
Special-Grade	24 hours	Work Supervisor → Department Head → HSE Department → Company Principal Leader	2 safety supervisors, equipped with rescue vehicles, ropes and first-aid kits; fire trucks/emergency personnel on standby
First-Grade	12 hours	Work Supervisor → Department Safety Officer → Department Head → HSE Department	2 safety supervisors (1 on-site + 1 on the ground), use double-hook safety harnesses + fall arresters; special acceptance for scaffolding
Second-Grade	4 hours	Work Supervisor → Department Safety	1 safety supervisor; set up warning zones + safety nets under the operation site;

		Officer → Department Head	inspect protective equipment every 30 minutes
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## Chapter 4 Work at Height Management Process

### Article 12 Work Application and Approval

#### 1. Application Materials:

- *Work at Height Permit* (fill in operation location, height, content, time and personnel information);
- *Risk Analysis Form* (identify fall, object strike, electric shock risks and control measures);
- Special work plans (such as scaffolding erection, suspended work);
- Copies of operators' special operation certificates and physical examination reports.

#### 2. Approval Requirements:

- Approvers must conduct on-site verification (not a mere formality);
- Permit Validity: Special-grade ≤ 2 hours, First-grade ≤ 4 hours, Second-grade ≤ 8 hours; reapply if expired.

### Article 13 Pre-Work Preparation

#### 1. Personnel Preparation:

- Operators: Confirm physical condition (no dizziness, fatigue), test-wear protective equipment (secure safety harness buckles, correct safety helmet wearing);
- Safety Supervisors: Familiarize with emergency plans, inspect emergency equipment (rescue ropes, first-aid kits, walkie-talkies).

#### 2. Environment and Equipment Inspection:

- Meteorological Conditions: Stop work in wind force ≥ Level 6, rainy, snowy or thunderstorm weather; prepare heatstroke prevention materials (water, heatstroke medicine) in high-temperature weather;
- On-Site Conditions: Operation surface load-bearing meets requirements (shelves according to rated load, scaffolding load-bearing ≥ 2.5kN/m<sup>2</sup>); edge/openings protected (railings ≥ 1.2 meters, toe boards 18cm); emergency channels unobstructed (width ≥ 1.2 meters);
- Height-Access Equipment: Ladders with no cracks (intact anti-slip mats at ladder feet); scaffolding with vertical pole spacing ≤ 1.5 meters, horizontal pole spacing ≤ 1.2 meters; scaffold planks fully laid with no gaps;
- Electrical Equipment: Welding machines, electric drills with intact insulation (insulation resistance ≥ 0.5MΩ) and no damage to power cords.

### 3. Safety Protection Measures:

- Personal Protection: Double-hook safety harnesses (GB 6095-2021), anti-slip shoes (tread depth  $\geq 3\text{mm}$ ), safety helmets (GB 2811-2019); add fall arresters (rated load  $\geq 225\text{kg}$ ) for suspended work;
- On-Site Protection: Set up warning zones (enclosed with warning tapes, hung with "Work at Height in Progress, No Entry"); hang safety nets (GB 5725-2020, mesh size  $\leq 10\text{cm}$ ) under the operation site; install protective railings (red-white warning paint) at edges.

### 4. Safety Briefing:

- Safety supervisors read out briefing content (risk points, protective measures, emergency steps); all personnel sign to confirm.

## Article 14 Work Implementation

### 1. Process Control:

- Climbing: Operators climb along ladders/scaffolding, maintain three-point contact (two hands + one foot or two feet + one hand), no hand-held tools/materials (transferred via tool bags);
- Operation: Tools/materials stacked stably (no exceeding the edge of the operation surface); timely clean waste materials; no chasing or frolicking on the operation surface;
- Supervision: Safety supervisors inspect protective equipment (safety harness tightness, safety net damage) every 30 minutes; communicate with operators regularly (confirm physical condition); prohibit unrelated personnel from entering the warning zone;
- Illumination: Night work (only for emergency repairs) requires illumination  $\geq 50\text{lux}$ ; lamps fixed (avoid direct glare to eyes); add 1 additional safety supervisor.

### 2. Work Suspension:

- Immediately stop work and evacuate operators if any of the following occurs:
  - Protective equipment failure (safety harness breakage, safety net damage);
  - Operation platform/scaffolding shaking or deformation;
  - Operators feeling unwell (dizziness, palpitations);
  - Sudden harsh weather (sudden wind force increase, thunderstorms).

## Article 15 Post-Work Management

### 1. On-Site Cleaning:

- After operators evacuate, recover protective equipment (safety harnesses, safety helmets); clean tools/materials on the operation surface (no residual bolts, welding slag);
- Dismantle temporary facilities (warning tapes, safety nets); restore material placement (in accordance with warehouse requirements);

- Inspect the operation area: Check for damage to shelf beams and equipment components; report problems immediately if found.

## 2. Equipment Inspection:

- Inspect height-access equipment (ladders, scaffolding): Return to storage if undamaged; mark for repair if damaged;

- Inspect protective facilities (railings, safety nets): Maintain integrity and record status.

## 3. Acceptance and Archiving:

- Work supervisors and safety supervisors fill out the *Work at Height Acceptance Form*, confirming "Work Completed, On-Site Safe";

- Retrieve the *Work at Height Permit* and archive it together with the *Risk Analysis Form*, *Safety Checklist* and *Safety Facility Acceptance Record*;

- Departments organize records monthly and submit them to the HSE Department for storage (retention period  $\geq 1$  year).

# Chapter 5 Special Work at Height Control

## Article 16 Scaffolding Work

### 1. Application Scenarios: Scaffolding erection, dismantling and work on scaffolding;

### 2. Control Measures:

- Erection: Operated by certified personnel; vertical/horizontal pole spacing complies with specifications; scaffold planks fully laid (firmly fixed); protective railings ( $\geq 1.2$  meters) and toe boards (18cm) installed;

- Acceptance: After erection, joint acceptance by the HSE Department and Equipment Department; fill out the *Safety Facility Acceptance Record*; use only after qualification;

- Use: No overloading ( $\leq 2.5\text{kN/m}^2$ ); no chasing on scaffolding; regular inspection (once a day);

- Dismantling: Dismantle from top to bottom; no throwing of components; set up warning zones; assign dedicated supervisors.

## Article 17 Suspended Work

### 1. Application Scenarios: Work without fixed platforms (such as welding on top of pipeline equipment, warehouse ceiling maintenance);

### 2. Control Measures:

- Use qualified hanging baskets/hangers (load-tested); operators wear double-hook safety harnesses + fall arresters (fixed to points with load-bearing  $\geq 5\text{kN}$ );

- Double Protection: Set up double-layer safety nets under the operation site (first layer 5-10 meters from the operation surface, second layer 2-3 meters from the ground);

- Assign dedicated personnel to operate lifting equipment (hanging basket lifting); regularly inspect safety devices (such as brakes, limiters);
- Operation time  $\leq$  2 hours; avoid prolonged suspension.

## Article 18 Cross Work

1. Application Scenarios: Multi-layer simultaneous work (such as upper-layer maintenance, lower-layer loading/unloading);
2. Control Measures:
  - Department Coordination: Unified command; clarify the main operation unit; stagger operation times;
  - Isolation Protection: Set up isolation layers (steel plates or safety nets) under upper-layer work to prevent object falls;
  - Enhanced Supervision: Assign safety supervisors at each layer; transmit signals (such as using walkie-talkies); prohibit staying on the lower-layer operation surface.

## Article 19 Opening Work

1. Application Scenarios: Work at warehouse floor inspection holes, equipment top observation holes;
2. Control Measures:
  - Install protective railings ( $\geq$  1.2 meters) or cover with steel plates (thickness  $\geq$  5mm, firmly fixed) around openings;
  - When operators work above openings, lay scaffold planks (covering openings, fixed at both ends) and wear safety harnesses;
  - Set up warning zones under openings; hang "Caution: Fall Risk" signs; prohibit passage.

## Chapter 6 Emergency Management

### Article 20 Emergency Plans

The HSE Department takes the lead in formulating the *Emergency Plan for Fall Accidents in Work at Height*, including the following content:

1. Emergency Organization: Commander-in-Chief (Company Principal Leader), members (personnel from HSE, Equipment, Medical and Administrative Departments);
2. Emergency Equipment: Rescue vehicles, rescue ropes (length  $\geq$  30 meters), emergency stretchers, first-aid kits (tourniquets, fracture splints), walkie-talkies;
3. Disposal Process (see Appendix 5): Accident Occurrence  $\rightarrow$  Immediate Report  $\rightarrow$  Activate Plan  $\rightarrow$  On-Site Warning  $\rightarrow$  Implement Rescue  $\rightarrow$  Medical Treatment  $\rightarrow$  Accident Investigation  $\rightarrow$  Corrective Measures;

4. Contact Information: Hospital 120, Fire Department 119, superior unit emergency phone; posted in prominent locations in the operation area.

## **Article 21 Emergency Preparation and Training**

### **1. Emergency Materials:**

- Equip operation sites with first-aid kits, rescue ropes and walkie-talkies;
- The HSE Department inspects materials quarterly (medicine validity, no rope wear) and supplements promptly.

### **2. Training and Drills:**

- New Employees: No less than 8 hours of emergency training (fall rescue, first-aid skills); work only after passing assessment;
- Organize 1 emergency drill every 6 months (simulating fall rescue, fracture fixation); participants include operators, safety supervisors and rescuers;
- Conduct assessment within 7 days after drills; summarize problems (such as unskilled rescue actions) and update plans.

## **Article 22 Accident Reporting and Disposal**

1. In case of accidents (falls, object strikes), on-site personnel shall immediately report to the HSE Department and Emergency Command Center; no delay or concealment is allowed;

### **2. The Emergency Command Center activates the plan:**

- Minor Injuries: Handled by the Company's infirmary; record in the *Work-Related Injury Record Form*;
- Severe Injuries/Deaths: Immediately report to the HSE Department; call 120/119; cooperate with professional rescue;

3. After the accident, the HSE Department takes the lead in the investigation: Analyze causes (such as not wearing safety harnesses, insufficient platform load-bearing); issue an investigation report; formulate preventive measures; hold responsible persons accountable.

## **Chapter 7 Inspection and Assessment**

### **Article 23 Inspection Mechanisms**

1. Daily Inspection: Department safety officers inspect operation sites daily; verify permits, safety supervisor performance and protective equipment compliance; fill out the *Work at Height Inspection Record*;
2. Special Inspection: The HSE Department conducts monthly special inspections, focusing on:

- Completeness of records for high-risk work (special-grade, first-grade);
  - Maintenance of protective equipment (safety harness testing once every 6 months, safety net testing once a year);
  - Compliance of contractor work;
3. Annual Audit: The Company organizes annual system audits; entrust third-party institutions to evaluate the effectiveness of system implementation and propose improvement suggestions.

## **Article 24 Assessment and Rewards/Punishments**

### 1. Rewards:

- Departments with no violations or accidents within a year receive HSE performance bonus points (accounting for 10% of the total score);
- Individuals who promptly stop major hazards (such as operators not wearing safety harnesses) are rewarded RMB 500-2,000;
- Individuals who propose adopted improvement suggestions (such as optimizing protective equipment) are rewarded RMB 1,000-3,000.

### 2. Punishments:

- For conducting work without permits: Work supervisors are fined RMB 1,000; department heads are fined RMB 2,000;
- For safety supervisors leaving posts or failing to stop violations: Suspend qualifications for 3 months; deduct 15 performance points;
- For contractor violations: Deduct HSE performance bonds (RMB 5,000-20,000); terminate cooperation for serious violations;
- For general accidents (loss < RMB 50,000 or minor injuries): Department heads are suspended for inspection; responsible persons have 30% of performance deducted; for major accidents (loss ≥ RMB 500,000 or severe injuries/deaths): Pursue criminal liability.

## **Chapter 8 Supplementary Provisions**

### **Article 25 Relevant Documents**

1. *Work Safety Law of the People's Republic of China*
2. *Regulations on the Training, Assessment and Management of Special Operation Personnel*
3. *Classification of Work at Height (GB/T 3608-2008)*
4. *Technical Code for Safety of Work at Height in Construction (JGJ 80)*
5. *HSE Management System Requirements*
6. *HSE Work Permit Management Regulations*

7. *HSE Emergency Preparedness and Response Management Procedure*

## **Article 26 Record Forms**

1. *Work at Height Permit*
2. *Work at Height Risk Analysis Form*
3. *Work at Height Inspection Record*
4. *Work at Height Safety Checklist*
5. *Safety Facility Acceptance Record*
6. *Work at Height Acceptance Form*
7. *Work at Height Violation Rectification Form*
8. *Emergency Drill Record*
9. *Work-Related Injury Record Form*

## **Article 27 Interpretation and Effectiveness of the Procedure**

1. This procedure is interpreted by the HSE Management Department (Quality, Health, Safety and Environmental Department);
2. This procedure takes effect from the date of issuance; the former *Work at Height Safety Regulations of Pipeline Materials and Equipment Co., Ltd.* is repealed simultaneously.

## **Article 28 Appendices**

1. Appendix 1: *Work at Height Permit Template (Special-Grade/First-Grade/Second-Grade)*
2. Appendix 2: *Work at Height Safety Checklist*
3. Appendix 3: *Work at Height Safety Prohibitions*
4. Appendix 4: *Protective Equipment Usage Requirements*
5. Appendix 5: *Work at Height Emergency Disposal Flowchart*

## **Appendices**

### **Appendix 1: Work at Height Permit (Template)**

Item	Content to be Filled
Applying Department	(Department to which the operation area belongs, e.g., Equipment Management Department, Warehouse Department)

Work Location	(Detailed location, e.g., North Area of Maintenance Workshop, Shelf Area A - 3rd Floor)
Work Height	_____ meters (from fall height reference plane to operation surface)
Work Content	(e.g., "Scaffolding Erection", "Welding on Top of Pipeline Equipment", "Warehouse Ceiling Maintenance")
Work Time	From ____ year ____ month ____ day ____ hour ____ minute to ____ year ____ month ____ day ____ hour ____ minute (Validity: Special-grade ≤ 2h, First-grade ≤ 4h, Second-grade ≤ 8h)
Work Grade	<input type="checkbox"/> Special-grade <input type="checkbox"/> First-grade <input type="checkbox"/> Second-grade
Operator Information	Operator: _____ Certificate No.: _____; Safety Supervisor: _____ Certificate No.: _____
Safety Measures Confirmation	1. Protective equipment in place <input type="checkbox"/> 2. Warning zone set up <input type="checkbox"/> 3. Emergency materials prepared <input type="checkbox"/> 4. Meteorological conditions qualified <input type="checkbox"/>
Approval Comments	Department Safety Officer: _____ Date: _____; Department Head: _____ Date: _____
	HSE Management Department: _____ Date: _____; Company Principal Leader (for Special-grade): _____ Date: _____
Work Termination Confirmation	On-site cleaned, no safety hazards: Work Supervisor: _____ Safety Supervisor: _____ Date: _____

## Appendix 2: Work at Height Safety Checklist

Inspection Category	Inspection Item	Inspection Content	Inspection Standard	Inspection Result ( <input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified)	Remarks

Personnel Qualification	Operator Qualification	Special operation certificate, physical examination report	Valid certificate, no occupational contraindications	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified	Retain copies
	Safety Supervisor Qualification	Supervision training certificate	Qualified through training, familiar with emergency plans	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified	
Protective Equipment	Personal Protection	Safety harnesses, safety helmets, anti-slip shoes	Safety harnesses without damage (GB 6095), safety helmets compliant (GB 2811)	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified	Test-wear confirmation
	On-Site Protection	Safety nets, protective railings, warning tapes	Safety nets without gaps (GB 5725), railings height $\geq 1.2$ meters	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified	
Work Environment	Meteorological Conditions	Wind force, temperature, weather conditions	Wind force < Level 6, no thunderstorms/heavy fog, temperature - 10°C~35°C	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified	Stop work in harsh weather
	Operation Surface Conditions	Load-bearing capacity, flatness, anti-slip measures	Meet design load, no standing water/oil, intact anti-slip mats	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified	Check rated load for shelf work
Equipment Facilities	Height-Access Equipment	Ladders, scaffolding, hanging baskets	Ladders without cracks, scaffolding qualified through acceptance,	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified	Check <i>Acceptance Record</i>

			hanging basket brakes effective		for scaffolding
	Electrical Equipment	Welding machines, electric drills, lighting	Intact insulation, no power cord damage, illumination $\geq$ 50lux for night work	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualifie d	Focus on night work inspection
Emergenc y Preparatio n	Emergency Materials	Rescue ropes, first- aid kits, walkie- talkies	Rescue rope length $\geq$ 30 meters, complete first-aid supplies, unobstructed communication	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualifie d	Test walkie- talkies
	Emergency Channels	Channel width, unobstruct ed condition	Width $\geq$ 1.2 meters, no obstacles	<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualifie d	
Inspector's Signature:		Inspection Date: ____ year ____ month ____ day	Work Supervisor's Confirmation:		

## Appendix 3: Work at Height Safety Prohibitions

### 1. Personnel Prohibitions

1. Strictly prohibit work at height by personnel without special operation certificates or with expired certificates;
2. Strictly prohibit work by personnel under the influence of alcohol, fatigue (continuous work over 8 hours) or with occupational contraindications (hypertension, heart disease);
3. Strictly prohibit work without safety supervisors or when safety supervisors leave posts;
4. Strictly prohibit work by personnel who have not received safety briefings.

### 2. Work Prohibitions

1. Strictly prohibit work when safety measures are not implemented (e.g., no warning zones, protective failure);

2. Strictly prohibit work in harsh weather (wind force  $\geq$  Level 6, thunderstorms, heavy fog);
3. Strictly prohibit work using unqualified equipment (e.g., damaged ladders, unaccepted scaffolding);
4. Strictly prohibit throwing/catching tools/materials or chasing/frolicking on the operation surface.

### **3. Protection Prohibitions**

1. Strictly prohibit work without wearing safety harnesses (or using safety harnesses with low attachment and high use);
2. Strictly prohibit work at unprotected edges/openings (no railings/covers);
3. Strictly prohibit work on unreliable operation surfaces (insufficient load-bearing, inclination);
4. Strictly prohibit overloading scaffolding or hanging baskets (exceeding rated load).

## **Appendix 4: Protective Equipment Usage Requirements**

### **1. Safety Harness Usage Requirements**

1. Selection Principle: Priority to double-hook safety harnesses, complying with GB 6095-2021; service life  $\leq$  3 years;
2. Usage Specifications:
  - High Attachment, Low Use: Hooks fixed to firm points above the operation surface (e.g., shelf columns, scaffolding horizontal poles); prohibit hanging on points below the operation surface or unstable objects;
  - Inspection: Before use, check for no webbing damage, no hook cracks, no stitching detachment; avoid friction with sharp objects during use;
  - Storage: Store in a cool, dry place; avoid exposure to sunlight/moisture; no contact with oil stains.

### **2. Safety Net Usage Requirements**

1. Selection: Horizontal nets (under operation sites), vertical nets (edge protection); complying with GB 5725-2020; mesh size  $\leq$  10cm;
2. Erection:
  - Horizontal Nets: 5-10 meters from the operation surface; net edges firmly fixed to supports (spacing  $\leq$  1 meter); net surface flat without sagging;
  - Vertical Nets: Height  $\geq$  1.2 meters; bottom  $\leq$  0.2 meters from the ground; closely attached to the operation surface;
3. Maintenance: Inspect once a week; replace immediately if damaged; prohibit storing debris in the net.

### 3. Scaffolding Usage Requirements

1. Erection: Operated by certified personnel; vertical pole spacing  $\leq 1.5$  meters; horizontal pole spacing  $\leq 1.2$  meters; scaffold planks fully laid (closely butted, firmly fixed);
2. Acceptance: After erection, joint acceptance by the HSE Department and Equipment Department; fill out the *Safety Facility Acceptance Record*; hang "Available" signs after qualification;
3. Usage:
  - Load  $\leq 2.5\text{kN/m}^2$  (approximately  $250\text{kg/m}^2$ ); prohibit centralized stacking of materials;
  - Inspect before daily use: No vertical pole inclination, no loose scaffold planks, intact protective railings;
4. Dismantling: Dismantle from top to bottom; prohibit sectional dismantling or throwing components; set up warning zones; assign dedicated supervisors.

### Appendix 5: Work at Height Emergency Disposal Flowchart

flowchart TD

A[Fall/Object Strike Accident Occurs] --> B[On-Site Personnel Immediately Report to HSE Department + Emergency Command Center]

B --> C[Activate the \*Emergency Plan for Fall Accidents in Work at Height\*]

C --> D[Set Up On-Site Warning Zone, Prohibit Unrelated Personnel from Entering]

D --> E[Emergency Rescue Team Arrives: Use Rescue Ropes and Stretchers to Transfer the Injured (Avoid Secondary Injuries)]

E --> F{Injury Severity}

F -->|Minor Injuries| G[Handled by Company Infirmary, Record in \*Work-Related Injury Record Form\*]

F -->|Severe Injuries/Unconsciousness| H[Call 120, Arrange for Medical Treatment, Assign Personnel to Accompany]

H --> I[Protect Accident Scene (Retain Protective Equipment, Operation Platform Status)]

G --> I

I --> J[HSE Department Leads the Establishment of an Investigation Team to Analyze Accident Causes]

J --> K[Issue Accident Investigation Report, Formulate Corrective Measures]

K --> L[Implement Rectification, Strengthen Training/Inspection, Avoid Similar Accidents]