



# **Operation, Safety Standards and Performance of HASAS for Demolition and Foundation Projects**

Jason Wong  
Senior Consultant  
ISAS Management Office



# **ISAS Guidance & Audit Criteria**

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- Housing Authority Safety Auditing System Version 1.3
- Code of Practice on Safety Management (Labour Department)
- Relevant F&IU Regulations and OSH Regulations
- Audit Criteria (ISAS Management Office)



# Part A. OSH Management System



## Section 3. Safety Training

**Question 3.1.1** Are there arrangements such as training need analysis and training plan to ensure all employees received appropriate safety training?

### Common Problems

1. Training plan not derived from training need analysis, fit with task or progress status
2. Training need for site management missing
3. Training records does not include time of training, location, length of training, contents of training. Results, date & time of the test were not recorded.

### Question 3.1.1

- **Audit Criteria**

Focus on the quality of the training need analysis and training plan. The safety training plan should include these items, otherwise the answer should be "No".

- (a) provision of schedule of training (with tentative date)
- (b) location of training
- (c) training provider
- (d) the targeted trainees
- (e) specification of the courses
- (f) type of refresher course to be provided (where applicable)

Verification of the safety training programme that has been identified and implemented is necessary.



## Section 6. Programme for Inspection of Hazardous Conditions

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**Question 6.1.5** Do safety officers and safety supervisors carry out safety inspections at regular intervals?

### Common Problems

1. Arrangement on different types of safety inspection were not addressed in safety plan.
2. Duties of SO & SS were not clearly stated in the safety plan.
3. Poor quality and “unreliable” safety inspection such as no follow up action for substandard conditions and fill in items that do not exist.

## Question 6.1.5

### • Audit Criteria

1. Focus on the quality of inspection reports
2. Coverage of the inspection report that caters all site activities;
3. The location, area, date for non-conformity spotted, the priority of rectification action, the person responsible for rectification etc. should be clearly stated and recorded.
4. Non-conformity identified in the checklist should be reflected and follow up in section/report for corrective actions;
5. Prompt remedial action for non-conformity with imminent danger
6. Repeating of the same non-conformity on site should not be acceptable as it reflects problems on the effectiveness and thoroughness of inspection and the monitoring system on site.



## Section 7. Job Hazard Analysis

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**Question 7.2.1** Is the development of control measures such as safe working procedures/ method statements/permit to work activities as the control measures based on the results of risk assessment?

### Common Problems

1. Risk assessment was not conducted by the risk assessment team
2. No risk assessment & method statement were conducted for specific activities
3. The method statement was not developed based on the results of risk assessment and nothing on safe working procedure was mentioned.
4. Safe working procedure was not developed based on risk assessment & not according to the work sequence.
5. Outdated safety rules & procedures.

## **Question 7.2.1**

- **Audit Criteria**

Auditor will testify with site management whether auditee has developed the safe working procedures/method statements/permit to work, etc based on the results of the risk assessment.

Otherwise, all questions in sub-section 7.2 should be "No".



## Section 9. Accident Investigation

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**Question 9.1.1** Is there a detailed procedure to ensure that all accidents and dangerous occurrences are promptly reported and recorded?

### Common Problems

1. To whom the worker should report the accident or dangerous occurrence and the requirement for worker to promptly report the accident or dangerous occurrence were not mentioned in the safety plan.
2. Safety plan did not specify the time frame that contractor should report fatal/serious accident, dangerous occurrence to Labour Department.

## Question 9.1.1

### • Audit Criteria

1. There is a procedure in safety plan that can meet the criteria of prompt reporting and recording of accident and dangerous occurrence (including time frame).
2. "Prompt" reporting and recording should be within a reasonable period of time such as serious accident must be immediately report to site agent/project manager etc. Reporting to Labour Department as required by regulation can be used as a reference.
3. All accidents and dangerous occurrence refer to ALL cases no matter it is serious or not.
4. There should be no "N/A" even though there is no accident. Auditor will verify the accident reporting procedures as well as verification with site personnel to ensure they understand the procedure.
5. The answer should be "NO" if there is no detailed procedure or the verification proves procedure not practising.



## Section 9. Accident Investigation

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**Question 9.1.2** Is there a detailed procedure to ensure that all accidents and dangerous occurrences are promptly investigated?

### Common Problems

1. The requirement for prompt investigation of the accident or dangerous occurrence were not mentioned in the safety plan.

## Question 9.1.2

### • Audit Criteria

1. There is a procedure in safety plan that can meet the criteria of prompt investigation of accident and dangerous occurrence (including time frame). The detailed procedure refers to procedure that is capable of ensuring all accidents and dangerous occurrences are promptly investigated.
2. “Prompt” investigation should be within a reasonable period of time such as serious accident is immediately investigated by the safety office/project manager etc.
3. No “N/A” even though there is no accident. Auditor will verify the accident reporting procedures as well as verification with relevant site personnel such as project manager/site agent (or personnel who is responsible for carrying out the investigation) to ensure they understand the procedure.
4. The answer should be "NO" if there is (a) no detailed procedure, (b) not ALL accidents/dangerous occurrences investigated promptly, (c) the verification proves procedure not practiced on site.



## Section 9. Accident Investigation

**Question 9.1.4** Does the accident/incident investigation report cover at least the circumstance, causes of accident and recommendations for preventing the recurrence of accident/incident?

### Common Problems

1. The circumstances of the accident and the background information of the injured person were not clearly identified
2. The root cause of the accident was not identified
3. Preventive measure mainly focus on training/not arising from causes of accident
4. Report's allegation on injured worker's own fault and should bear the responsibilities

### Question 9.1.4

- **Audit Criteria**

1. Focus on the quality of the accident report such as skill of writing, investigation technique.
2. If the recommendations on the report were not appropriate to prevent the recurrence of similar accident/incident, the answer should be "NO". The answer could be "N/A" if there is no accident.
3. Even though the person in-charges are generally considered competent based on their title/training certificate obtained (e.g. RSO, SS training, etc.), auditor still can comment on their competency based on the audit findings ending up with "non-conformity".



## Section 12. Health Assurance Programme

**Question 12.1.2** Have the risks to health arising from these substances been assessed?

### Common Problems

1. Poor quality of risk assessment on hazardous substances , inadequate coverage of health hazards.
2. Preventive measures only focused on safety training

### • **Audit Criteria**

1. Focus on the coverage of risk assessment on substances hazardous to health such as health hazards, severity of harm, likelihood of occurrence and control measures.
2. Risk rating should also be incorporated in the assessment and it should be assessed based on hazards, quantity, frequency and method of using the substances etc. Otherwise, the answer should be "No".



## Section 12. Health Assurance Programme

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**Question 12.3.1** Have noise assessment been carried out to determine which machines, combinations of machines or work processes including ambient noise, are liable to expose workers to noise levels of 85 dBA or more?

- **Common Problems**

1. The calculation of noise level was wrong.
2. Noise assessment report recommended workers to put on hearing protectors and to demarcate ear protection zone, even the noise level was below the limit.

- **Audit Criteria**

1. Accurate and good quality of noise assessment report
2. Appropriate control measures should be given



# **Part B. Implementation of the OSH Management System**



# High Risk Activities

- 14.1.3 Working at Height
- 14.1.4 Housekeeping
- 14.1.5 Protection against Falling Objects
- 14.3.3 Lifting Operations
- Others

Welding & Cutting

Mechanical Plant & Equipment

Electrical Works



## 14.1.3 Working at Height

**Safety arrangement for anticipated work at height  
should be readily available on site**





## 14.1.3 Working at Height

**Working platform not securely fenced**



**No identification of man cage**





## 14.1.3 Working at Height

**Unfenced floor edge and opening**



**Unfenced edge of covered hoarding**



## 14.1.3 Working at Height

**Damaged lanyard**



**Safety harness not properly attached to fall arresting system – independent lifeline**





## 14.1.3 Working at Height

### Substandard working platforms on bamboo scaffold



Width of working platform/gangways

- not less than 400mm
- Not less than 650mm for gangway or used for movement of materials





# 14.1.3 Working at Height

## Means of Access & Egress

### Access ladder to excavation





## 14.1.3 Working at Height

### Means of Access & Egress

**Dangerous access to working area (Fall from height)**



**No fencing to dangerous place where switch board was located**





## 14.1.4 Housekeeping





## 14.1.5 Protection Against Falling Objects





## 14.1.5 Protection Against Falling Objects

**Use of tools bag/tool strap to prevent falling objects**





## 14.3.3 Lifting Operations

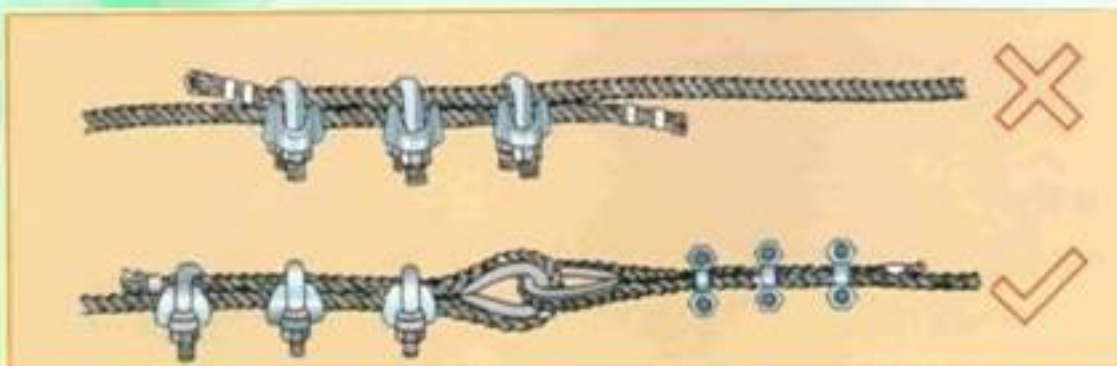
Missing and damaged safety latch





## 14.3.3 Lifting Operations

### Improper Clipping - U-Bolt Clips





## 4. Lifting Operations

- Chain, rope or lifting gear shall be of good construction, sound material, adequate strength, free from patent defect
- Shall not be used for any load exceeding its safe working load
- A wire rope which, in any length of 10 diameters, has a total number of visible broken wires exceeding 5% of the total number of wires in the rope, shall not be used





## 4. Lifting Operations

Improper wrapping of loose material in lifting operation

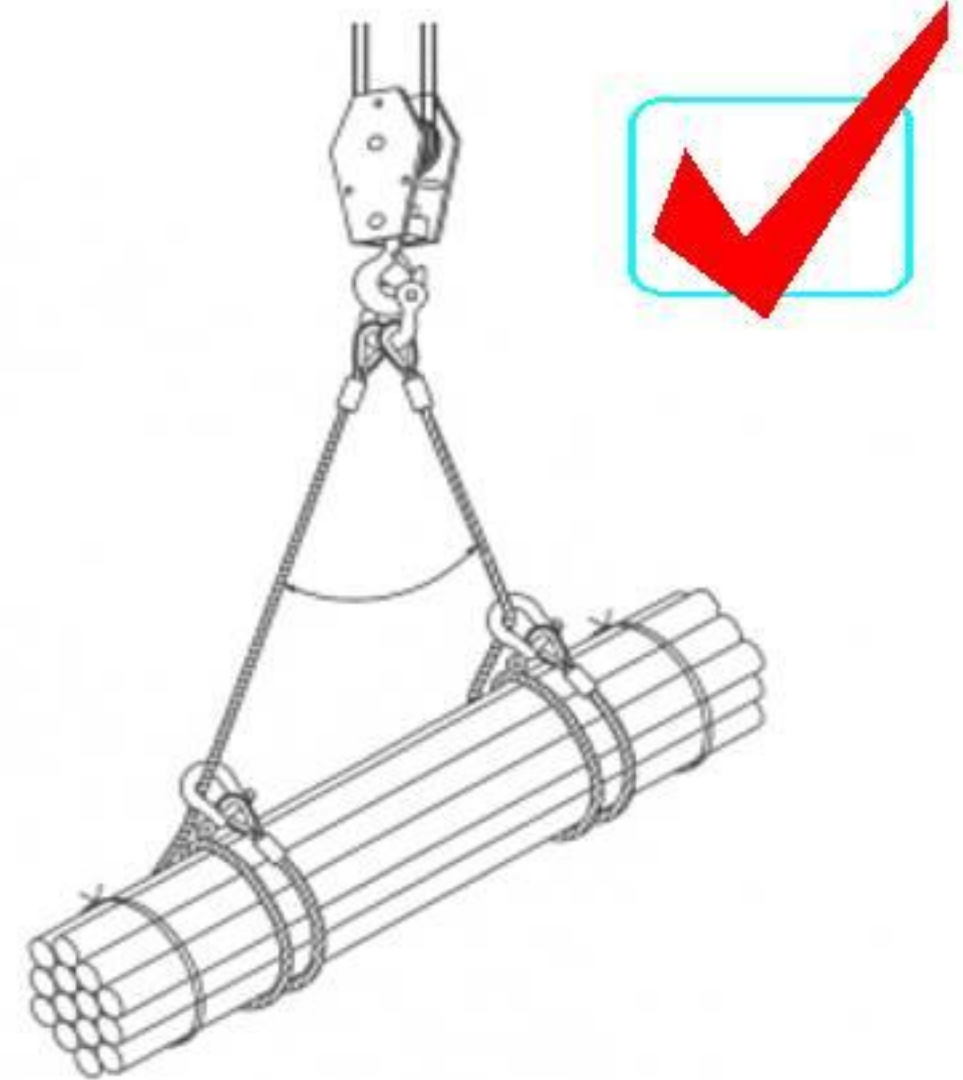
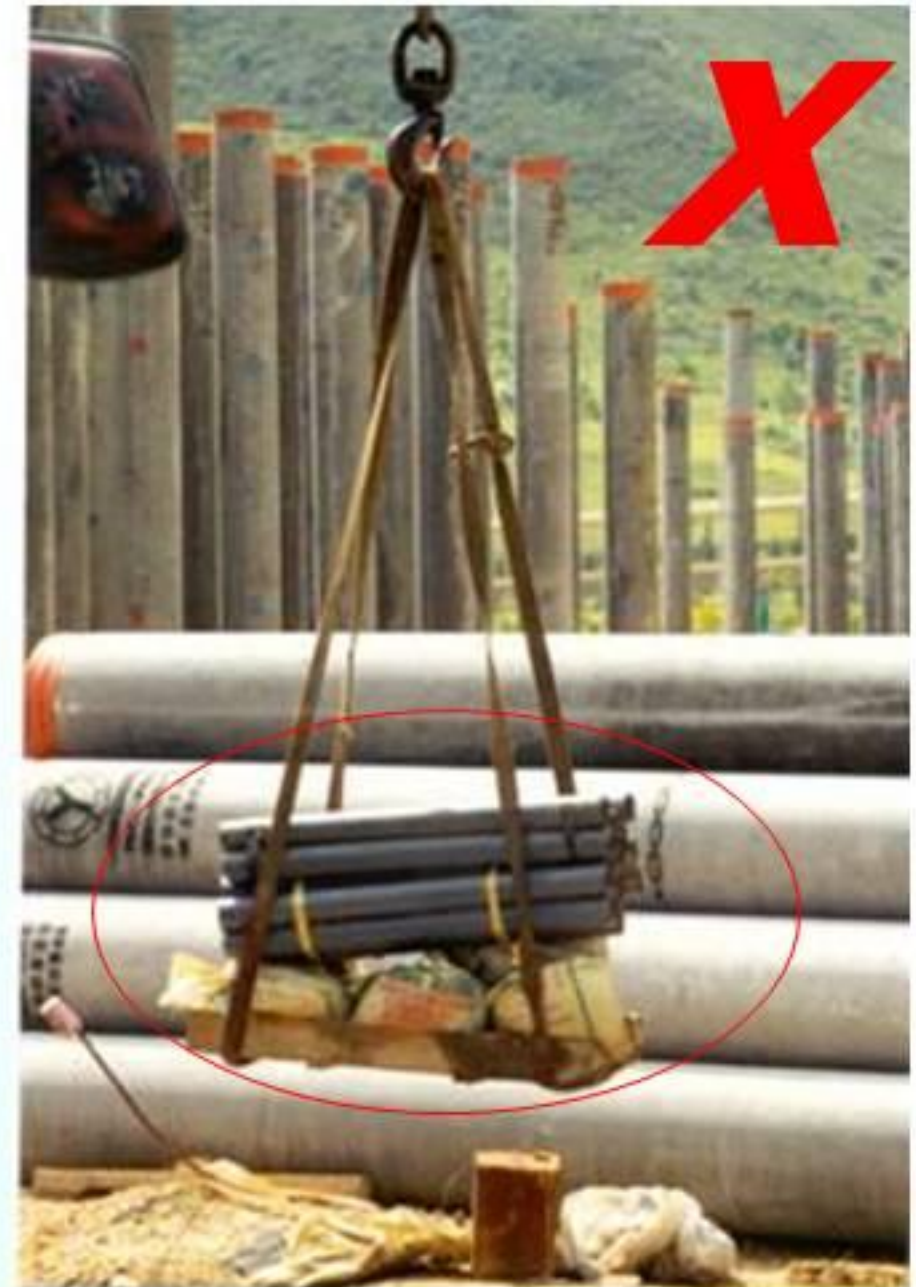


圖 16 兩條單支腳吊索以  
雙網扼索結法使用



## 4. Lifting Operations

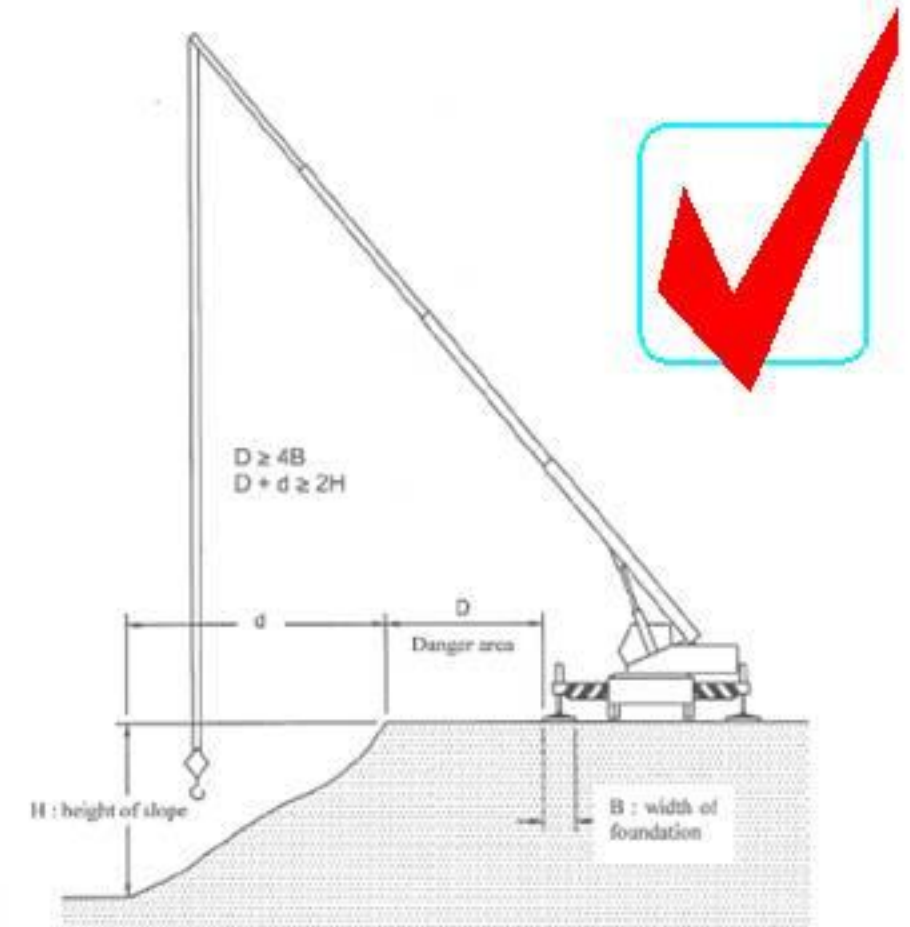
- Unsafe Lifting methods





## 14.3.3 Lifting Operations

Mobile cranes were found sitting too close to the edges of soil excavation



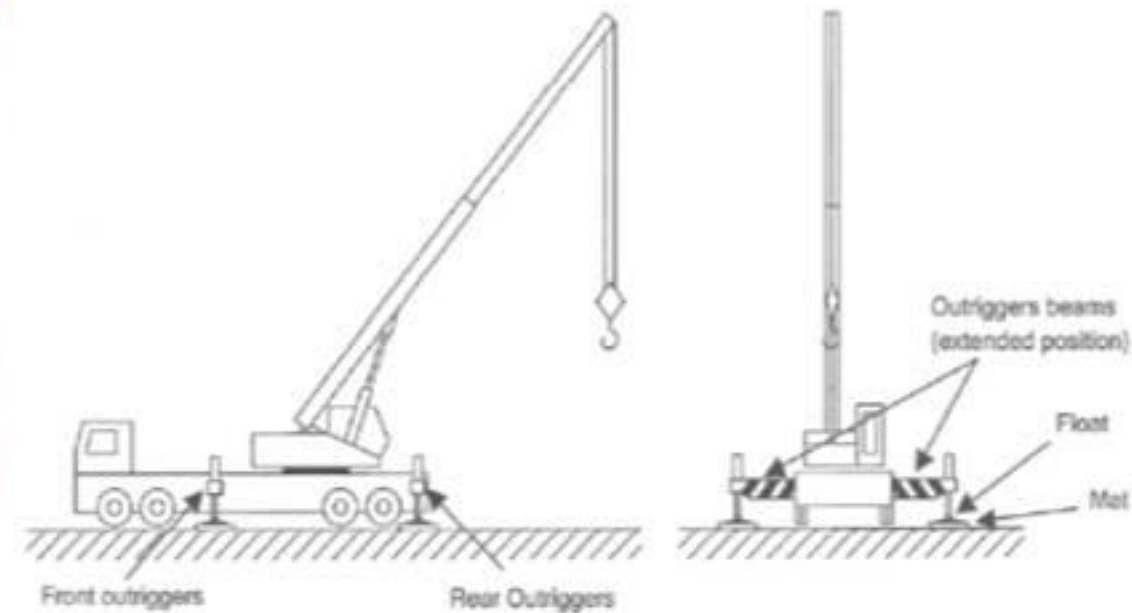
A safety distance at least 4 times the width of the foundation (the mat or timber blocking of the outrigger or the crawler) should be maintained between the foundation and the edge. (Paragraph 9.2.10 of Code of Practice for Safe Use of Mobile Cranes)



## 14.3.3 Lifting Operations



5 June 08



The mat or timber blocking should be at least **3 times** larger in area than the float (unless a smaller area is specified by the manufacturer) and completely support the float. For timber blocking, it should be tightly spaced and level to guarantee a right angle (90 degrees) between the cylinder and the float of the outrigger. (Paragraph 9.2.7 of Code of Practice for Safe Use of Mobile Cranes)





# 14.3.3 Lifting Operations

## Good Practice



Double Lifting  
Chains



## Others - Welding & Cutting

Incorrect labeling of gas cylinder

Not properly protected/ Unsafe electrical wire connection in the electric arc welding machine





## 5. Welding & Cutting

*Non-return valve installed for the cutting torch*



*Using 110V welding equipment*



*Pressure gauges and flash back arrestor installed in the flame cutting equipment*



**Welding in  
designated  
location  
with screen  
& exhaust**



# Others - Mechanical Plant & Equipment

**Installation of the  
“Reversing Video Device”  
in excavators**



**Poor maintenance of plant**





# Others - Electrical Work





*End*