



## **Systemic Safety Alert** **Fall from Height through Floor Openings**

### **Major systemic safety problems**

Floor openings are commonly found on construction sites and persons falling through these openings may sustain serious or even fatal injuries. Most accidents related to falling through floor openings were attributable to slack on-site control over protection of these openings and absence of a safe system of work, leading to the failure to ensure that adequate measures have been taken to prevent any persons from falling through the ineffectively protected openings. Major systemic safety deficiencies include:

- failure to conduct task-specific risk assessments and to formulate appropriate and adequate risk control measures;
- failure to implement an effective proactive inspection programme;
- slack control and monitoring to ensure that the risk control measures stay effective; and
- inadequate hazard communication through safety instruction, training and supervision.

### **Accident prevention measures<sup>1</sup>**

Registered Safety Officers (RSOs) should advise their employers/clients to:

- i) appoint a competent person to conduct task-specific risk assessments regarding the access to or work over/near floor openings to identify any foreseeable fall hazards in the workplaces and devise all necessary safety precautions/procedures to eliminate the hazards;

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<sup>1</sup> For the details of fall prevention measures, please refer to the “Overview of Work-at-Height Safety” issued by the Occupational Safety and Health Branch of the Labour Department.



- ii) devise and fully implement the corresponding risk control measures based on the results of the risk assessments. The following risk control measures, among others, shall be strictly adhered to:

Covering for openings

- ensure that all openings are adequately covered by suitable and sound materials of sufficient strength and capacity and the coverings are so constructed to prevent the fall of persons, materials and articles;
- replace the coverings immediately if they are defective or improperly constructed;
- secure the coverings of floor openings in position so that they will not be displaced accidentally; and
- mark the coverings of floor openings clearly and boldly with readable signs or markings to alert workers of the openings underneath.

Guarding for openings

ensure that all floor openings are effectively protected with (a) suitable guard-rails with the height of top guard-rails not less than 900 mm and not more than 1150 mm; and that of intermediate guard-rails not less than 450 mm and not more than 600 mm; and (b) toe-boards with the height of not less than 200 mm.

- iii) implement effective proactive safety inspection programme and arrange stringent on-site supervision to:
- ensure that all ineffectively protected floor openings are identified promptly;
  - ensure that the risk control measures as mentioned in item (ii) above concerning covering/guarding for openings are fully implemented as soon as possible; and
  - ensure that if the coverings, guard-rails and toe-boards are temporarily removed or remain unerected for the time and to the extent necessary for the access of persons or the movement of materials or other purposes of



the work concerned, they shall be put back or erected as soon as practicable after the expiration of that time.

- iv) provide all the workers involved with necessary safety information, instruction and training to ensure that they are familiar with the safe working procedures, safety precautions/measures and emergency procedures, and have fully understood their roles and responsibilities.

Registered Safety Auditors (RSAs) should take into account these systemic safety problems and accident prevention measures in executing safety audit functions.

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**DISCLAIMER**

This Systemic Safety Alert is issued to draw the attention of interested parties to the relevant systemic safety problems and accident prevention measures necessary to protect people engaging in similar works activities. The material contained in this Alert constitutes general guidance only. It does not reduce, limit, or replace, any legal obligations upon any person to comply with any statutory duties under relevant legislation. Users such as Managers and Supervisors should make their own evaluation of the information contained in this Alert to determine if it can be applied to their own situations and practices. The Labour Department does NOT accept any responsibilities for any loss or damage resulting from the use of or failure to use the information contained herein.