

WSHAlert

4 February 2021, Ref: 2021090

Accident Advisory: Worker fell from formwork structure

Ref: [2021076](#) WSH Alert Accident Notification dated 26 November 2020

On 24 November 2020, a worker was checking formwork panels at a construction site when he lost his footing and fell about 0.8m to the ground. The worker was conveyed to the hospital where he succumbed to his injuries the next day.

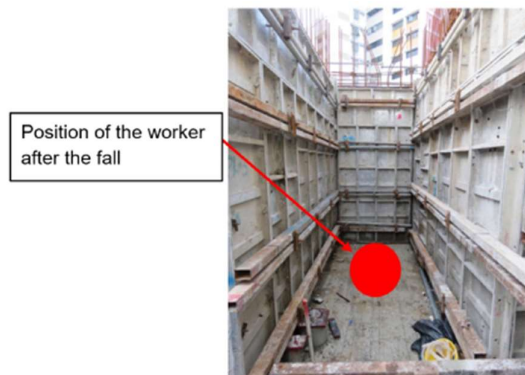


Figure 1: Scene of the accident.

Recommendations

Persons in control of workplaces and work activities such as occupiers, employers and principals are advised to consider the following risk control measures to prevent similar accidents:

Safe formwork

- Proprietary formwork systems should be erected and used strictly in accordance with manufacturers' instructions; and
- Provide adequate space for all work activities involving installation and dismantling of formwork structure.

Safe access

- Provide safe means of access to and around the formwork structure for the purpose of checking and inspection;
- Clearly mark designated access points with a sign or label and conduct on-site checks to ensure that access routes are safe for use;
- Access equipment (e.g. step ladder, tower scaffold, access platform) should be of suitable height for the task and fitted with the necessary guard railing to prevent falls. See examples of access platforms in Figure 2 and Figure 3;



Figures 2 and 3: Examples of access platform.
Image source: Courtesy of TEAMBUILD

- Ensure that the selected access equipment is of adequate strength and is wide enough, taking into consideration the tools and/ or equipment that workers are expected to carry; and
- Provide sufficient access platforms for the task so that there is no sharing of access equipment/platforms across teams at different work locations.

Safe use of tools

- Select the correct type, size and weight of tool for the task. Every tool has its proper application. Using the wrong tool or misusing a tool is often an invitation for personal injury and/or damage;
- Check tools regularly. Tools should be thoroughly examined before use and before storage. If found to be damaged or worn, tools should be sent for repair or discarded; and
- When not in use, return tools to their original storage location. Do not leave tools behind at the work site as this may present a tripping hazard or falling object hazard.

Worker training and supervision

- Ensure all workers exposed to work at height have received adequate Workplace Safety and Health (WSH) training and are familiar with the hazards of working at heights and the precautionary measures to be taken. Should the work involve hazardous work at height (liable to fall 3m and more), a permit-to-work system for such work must be implemented;
- Train workers on the safe use of access equipment and the tools provided;
- Site workers must be briefed on the safe method of work by the supervisor prior to work commencement. The briefing should also include the hazards which may be encountered on-site, the risk controls that have been put in place, and the emergency response procedures; and
- Provide on-site supervision to ensure that Safe Work Procedures are strictly adhered to, risk controls are not bypassed, and Personal Protective Equipment are worn correctly.

Head protection

- Equip workers with a safety helmet with chin strap. A properly-fitted correctly-worn helmet can reduce the risk of head injuries in the event of a fall.

Worker health

- Conduct a pre-work health survey at the start of each work shift to verify each worker's fitness to work for the task at hand. Workers who are feeling unwell should not be placed on the task or work shift.

Risk Assessment

Conduct a thorough Risk Assessment (RA) for all work activities to manage any foreseeable risk when working with formwork structures. In particular, the RA should cover:

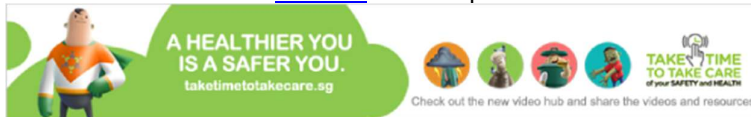
- the possibility of workers falling from the formwork structure;
- the provision of safe means of access and egress to and from the designated work area;
- the need for active on-site task supervision;
- the need for effective workplace housekeeping; and
- the training that each worker must fulfil prior to deployment.

Further Information

1. Workplace Safety and Health Act
2. Workplace Safety and Health (Risk Management) Regulations
3. Workplace Safety and Health (General Provisions) Regulations
4. Workplace Safety and Health (Construction) Regulations
5. Workplace Safety and Health (Work at Heights) Regulations 2013
6. Code of Practice on Workplace Safety and Health Risk Management
7. Code of Practice on Working Safely at Heights
8. Singapore Standard SS 98: 2013 Specification for Industrial Safety Helmets
9. Singapore Standard SS 580: 2020 – Code of Practice for Formwork
10. Ministry of Manpower Circular on Safety Requirements for Formwork Structures
11. WSH Guidelines on Workplace Housekeeping
12. WSH Council's Safety Timeout Checklist for Working at Heights
13. WSH Council's Safety Timeout Checklist for Formwork

Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 10 Dec 2020. This may be subject to change as investigations are still on-going. Please note that the recommendations provided here are not exhaustive and they are meant to enhance workplace safety and health so that a recurrence may be prevented. The information and recommendations provided are not to be construed as implying any liability on any party nor should it be taken to encapsulate all the responsibilities and obligations under the law.

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