



27 February 2008, 0708102



A Case to Save

>> Toppled Tower Crane Kills Workers

On 22 February 2008, a tragic accident happened at a construction worksite. A tower crane had collapsed resulting in three fatalities and injuring two others.

Two of the workers were in the crane's cabin when the crane collapsed. The third worker was hit by the falling crane.

Ministry of Manpower's (MOM) investigation is in progress.



The Workplace Safety and Health Advisory Committee (WSHAC) organised an information sharing session for the construction industry on 26 February 2008, including learning points on safe lifting operations. Access the WSHAC website [HERE](#) for the presentation materials.

MOM inspectors will be checking on cranes at worksites. All occupiers are required to immediately inspect their cranes on site to ensure that they are safe for use.

>> Advisory Note on Tower Cranes

(Please note that the following advisory note is provided for the benefit of enhancing workplace safety and health and in no way should the information be misconstrued as implying any liability on any party)

1. Tower cranes must be erected and dismantled by competent persons in the employment of Approved Crane Contractors. A thorough examination and testing by an Authorised Examiner must be undertaken after its erection.
2. The tower crane's foundation and wall ties (if applicable) shall be designed and supervised during its construction by a Professional Engineer (PE) of the relevant discipline. The PE must consider the following when designing the foundation:
 - The final height and configuration of the tower crane;
 - All applicable forces. Tower cranes are subjected to wind loading, vertical and horizontal forces, moments and torques even when they are not loaded.
3. In the light of the accident, owners and users of tower cranes are to do a thorough check of the crane's base, especially the foundation anchors.

4. Owners and users of tower cranes must use only approved components for their cranes.
5. All new/used tower cranes brought in from overseas and to be registered for use for the first time must be of a model type-approved for use in Singapore. Information on the type-approval for tower cranes is available [HERE](#).
6. Risk Assessment (RA) of the various types of work related to the cranes (such as erection, alteration, use, maintenance and dismantling of tower crane) shall be conducted to evaluate the risks to the safety and health of employees to which they are exposed while they are at work. Where the risks are significant, appropriate measures must be developed, implemented and maintained to eliminate or reduce the risks.
7. All lifting operations must be properly planned and supervised to ensure that every operation is carried out in a safe manner. The following minimum requirements should be met before starting any lifting operation:
 - a. A lifting plan should be developed and made available to all personnel involved in the lifting operation.
 - b. The crane used must have a valid examination and testing certificate. It must have been inspected by an Authorised Examiner at least once in every 12 months. Besides the mandatory annual inspection, regular maintenance and in-service inspections must be carried out by competent persons to ensure that the crane remains in good and safe working condition.
 - c. All personnel such as the crane operator, lifting supervisor, rigger and signaller are trained and competent to carry out the lifting operation.
8. Reference should be made to the crane manufacturer's operating manual, relevant statutory requirements, Codes of Practice and other applicable international or industry practices, including the following:
 - [Factories \(Operation of Cranes\) Regulations](#);
 - CP 37: Code of Practice for Safe Use of Mobile Cranes; and
 - CP 62: Code of Practice for Safe Use of Tower Cranes



This OSH Alert is available free of charge, may be printed or downloaded onto electronic, optical or similar storage media provided that such activities are for private research, study, or in-house use only. If such material is to be copied or reproduced, users are asked to ensure that the material is reproduced accurately and not in a misleading context, that the status of the material is identified and to acknowledge Ministry of Manpower, Singapore as the source of the material.

If you wish to update your OSH Alert profile, please [click here](#).

If you do not wish to continue receiving the OSH Alert by email, please [click here](#) to unsubscribe.

