

Safety & Health Circular No. 18/2010

Safe Operation of Mobile Cranes (Revised)

Date: 27 September 2010

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Recent incidents involving mobile cranes overturning during lifting operations on construction sites have aroused public concern. This is a revised circular regarding the use of mobile cranes aimed at helping to raise safety awareness.

Mobile cranes including crawler-mounted cranes, wheel-mounted cranes and truck-mounted cranes are widely used on construction sites. Accidents involving cranes overturning or load displacement can be avoided if the cranes are properly used. Your role in ensuring construction workplace safety is critical in this regard, and operations at site must be carefully managed at all levels to prevent accidents. Therefore, you should implement effective control measures to ensure the safe management of crane operations. Such measures include, but need not be limited to, the following:

- a) Observe relevant regulations and codes of practice, in particular:
 - the *Codes of Practice for Safe Use of Mobile Cranes*, and
 - the *Factories and Industrial Undertaking (Lifting Appliance and Lifting Gear) Regulations*.
- b) Provide a well-prepared operating area for mobile cranes—ensuring that:
 - access roads are adequately prepared;
 - there is room to erect and/or extend the boom;
 - if the mobile crane is to be set up on a structure, the allowable structural loads are not exceeded by the crane load;
 - operating locations are far enough away from shoring, excavation, trenches, buried utilities, foundations etc. to eliminate any risk of collapse;

- operating locations are chosen so that the minimum clearances from power lines are maintained. If not the power lines must be shut down or relocated by the utility so that contact cannot be made; and
 - public access to lift areas is prohibited and barricades are put in place.
- c) Conduct risk assessments as necessary, paying particular attention to the working environment. Protect against common accidents such as overturning of cranes, overloading of equipment parts, and collision with obstacles/falling objects during operations.
- d) Devise safe working procedures, including procedures for when cranes are left unattended for short periods and/or overnight.
- e) Ensure lifting appliances and lifting gears are suitable and in good working condition. Proper maintenance, testing, examination and inspection are to be conducted prior to use.
- f) Operate mobile cranes only on uniform, level and firm ground with sufficient load-bearing capacity. To prevent cranes overturning and/or collapse of supporting structures—steel plates/hardwood mats/timber blocking, of a sufficiently large area, should be used for outrigger supports on softer ground.
- g) Fully extend all outrigger beams during crane operation.
- h) Provide sufficient information, training and supervision to crane workers.
- i) Engage competent and trained personnel to operate such works.
- j) Deploy competent personnel to supervise such operations.
- k) Stop all lifting operations in bad weather.

If you have any further queries, please call the Labour Department's Occupational Safety and Health Advisory Telephone Service hotline on 2559 2297.