



Date: 23 April 2018

All Interested Parties,

CLARIFICATION ON THE SAFETY CLEARANCE FOR GANTRY CRANES AT WORKPLACES

This circular provides clarification to the safety circular on “Safety Clearance for Gantry Cranes at Workplaces”, Circular no. OSHD/SPEC/ESB/LE/01-2013, issued on 23 Oct 2012 (Annex A).

2 Paragraph 4 of the circular “Safety Clearance for Gantry Cranes at Workplaces” stipulates that to address the risk of entrapment or crushing of persons working at or near the tracks of a gantry crane, an unobstructed passageway, at least 750mm in width on each side of each rail shall be maintained parallel to and extending the entire length of the tracks upon which any gantry crane is operated. **The minimum width of 750mm shall be taken from the most protruding part of the crane to the fixed object** as illustrated in clause 6.1 (page 18) of the Guide to safe use of overhead travelling cranes, gantry cranes, jib cranes and hoist (Annex B).

3 Alternatively, effective engineering control measures must be implemented to prevent any person working near the track to be inadvertently crushed by any moving part of the crane during the crane’s motion.

4 Authorised Examiners are reminded to verify compliance of the above requirements during the commissioning of the gantry crane as well as during the subsequent periodic statutory examinations

5 The above requirements are for your immediate compliance.

Yours faithfully,

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Date of issue:	Classification:	Circular No:
23 April 2018	Overhead & Gantry Cranes	OSHD/SPEC/ESB/LE/01-2018

Annex A-
Safety Clearance for Gantry Cranes at Workplaces, Circular no. OSHD/SPEC/ESB/LE/01-2013,
issued on 23 Oct 2012



Ref: 20130304-56



Date: 4 March 2013

**All Suppliers, Owners and Users of Gantry Cranes
Authorised Examiners (Lifting Equipment), and
Other Interested Parties**

SAFETY CIRCULAR ON SAFE OPERATION OF GANTRY CRANES AT WORKPLACES

On 23 Oct 2012, a worker was trapped and crushed to death between a moving gantry crane and a stack of precast concrete slabs at a precast yard. The gantry crane was operated by an operator using a remote control to lift a pre-cast column onto a trailer. Preliminary findings revealed that there was not enough safety clearance between the gantry crane and the stack of concrete slabs. This created a hazardous zone for the trapping and crushing of persons. This circular serves as a reminder to duty-holders of the key safety requirements with respect to the safe operation of gantry cranes at workplaces.

Design Requirements for Gantry Cranes

2. All gantry cranes to be used in the workplace shall comply with the Approved Code of Practice, **SS497:2011 Code of Practice for Design, safe use and maintenance of gantry cranes, overhead travelling cranes and monorail hoists** or other internationally acceptable design codes or standards. This would include ensuring that the gantry cranes are equipped with all the required safety devices (e.g. Overload Limiter, Hoisting and Lowering Motion-Limiters, Working Space Limiters, Crane to Crane Motion-Limiters etc).

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Layout Requirements for Installation of Gantry Cranes

3. In addition, with respect to layout requirements and considerations for the installation of gantry cranes, Occupiers are also reminded to comply with **SS567:2011 Code of Practice for Factory Layout – Safety, Health and Welfare Consideration**. In particular, the Occupier has to take reasonable practicable measures to ensure the safe means of access to or egress from every place of work at or near the gantry crane. Also, the said workplace shall not be congested with machinery, materials or products so as to cause risk of injury to persons. Adequate space shall be allocated for storage of materials or products. Further details on the requirements can be found in section 2.11 - Bridge, gantry and overhead travelling cranes of SS567:2011.

Safety Clearance Requirements for Gantry Crane's Tracks

4 To address the risk of trapping or crushing of persons working at or near the tracks of a gantry crane, an unobstructed passageway of at least 750mm in width on each side of each rail, shall be maintained parallel to and extending the entire length of the tracks upon which any gantry crane is operated. This requirement is clearly stated in clause 15.3.1 of SS497:2011 and clause 2.11.11 of SS567:2011. **Authorised Examiners are reminded to check the compliance of the above requirement during the commissioning of the gantry crane as well as during the subsequent periodic statutory examinations.**

Implementation of Lifting Plan for lifting operations using Gantry Cranes

5. MOM would like to reiterate the requirement on establishment and implementation of a proper Lifting Plan for lifting operation carried out using gantry cranes. Regulation 4 of the WSH (Operations of Cranes) Regulations 2011 states that where any lifting operation involving the use of any crane is carried out in a workplace by a crane operator, it shall be the duty of the responsible person to establish and implement a Lifting Plan which shall be in accordance with the generally accepted principles of safe and sound practice. For reference, Occupiers and responsible persons are advised to refer to the Code of Practice on Safe Lifting Operations in the Workplace for further practical guidance on the implementation of the Lifting Plan. The Code is available for download at <https://www.wshc.sg/cms/CraneResources>.

6. The above requirements are for your immediate compliance.

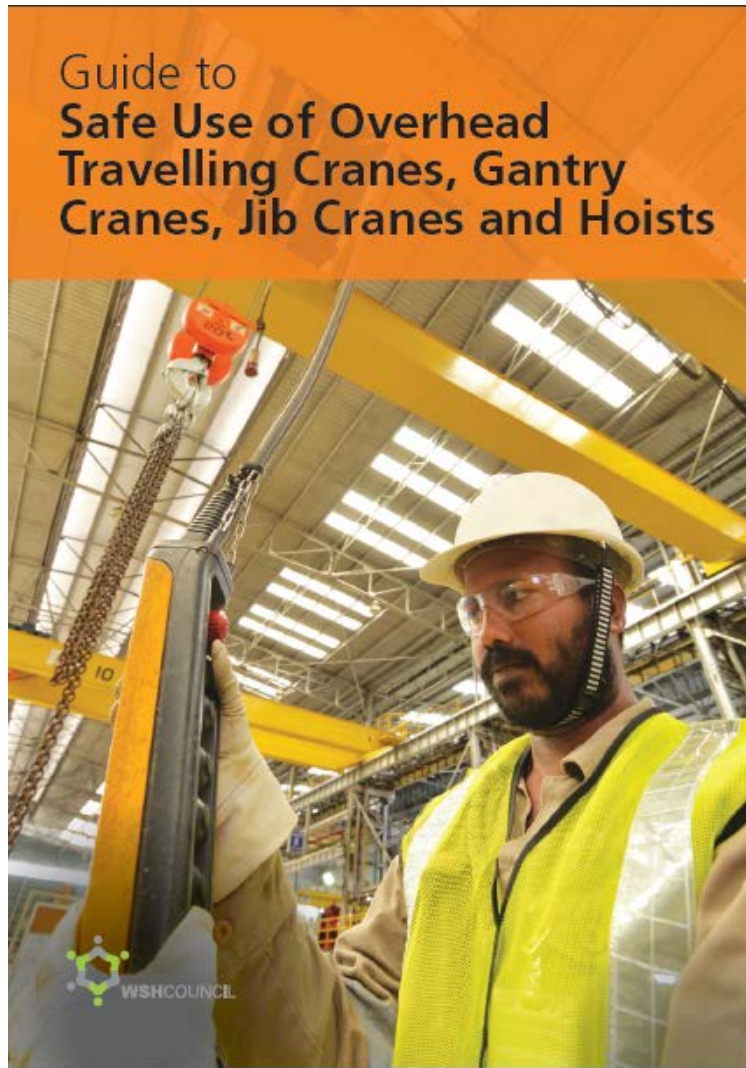
Yours faithfully,



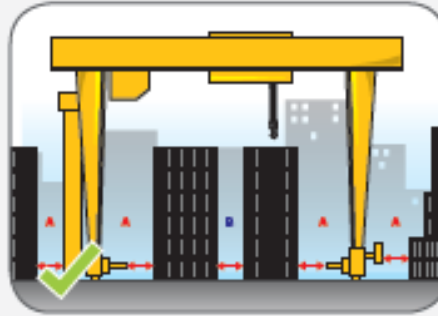
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Annex B-
Guide to safe use of overhead travelling cranes, gantry cranes, jib cranes and hoist



Ensure adequate clearances
between cranes and fixed objects.
 $A \geq 750\text{mm}$
 $B \geq 600\text{mm}$



Do not leave suspended load
overnight or unattended.



Figure 6: Safety considerations when operating cranes and hoists.

6.2 Tandem Lifting

When using more than one crane or with two hoists for tandem lifting operations, a competent person shall carefully plan out the operation in detail with a thorough lifting plan and emergency plans. The operation shall be carried out under proper supervision. The person supervising the operation shall fully understand the details of the operation and shall ensure that the operators understand the sequence and the hazards of the operation.

6.3 Maintenance

The employer must maintain a crane and its accessories in a condition that will not endanger an operator or other employee.

A preventive maintenance programme shall be established and the programme must be based on the manufacturer's recommendations and for the application as reviewed by a qualified person.

Please refer to SS 497 for further guidance.