

**1305.1607 SECTION 1607, LIVE LOADS.**

Subpart 1. [Repealed, 32 SR 7]

Subp. 2. **Section 1607.12.2.** IBC Section 1607.12.2 is amended to read as follows:

**1607.12.2 Vertical impact force.** The maximum wheel loads of the crane shall be increased by the percentages shown below to determine the induced vertical impact or vibration force. Impact load shall be applied to one hoist system at a time for multiple hoist or bridge systems.

Monorails, underhung bridge cranes and pendant operated top running bridge cranes:

15 percent minimum for hoist lift speeds of less than 30 feet per minute.

Percentage equivalent to 0.5 times the hoist lift speed, for lift speeds of 30 to 100 feet per minute.

50 percent maximum for hoist lift speeds greater than 100 feet per minute.

50 percent for magnetic pickup or vacuum lift type systems.

No impact load is required for hand chain (non-powered) hoists.

Cab operated or remotely operated top running bridge cranes:

25 percent minimum.

Subp. 3. **Section 1607.12.3.** IBC Section 1607.12.3 is amended to read as follows:

**1607.12.3 Lateral force.**

Top running powered bridge cranes. The lateral force on top running crane runway beams with powered trolleys shall be calculated as 20 percent of the sum of the rated capacity of the crane and the weight of the hoist and trolley. The lateral force shall be assumed to act horizontally at the traction surface of a runway beam, in either direction perpendicular to the beam, and shall be distributed according to the lateral stiffness of the runway beam and supporting structure. The runway beams shall be designed for the lateral and torsional loads, as well as for the maximum lateral deflection limit of Span/800.

Monorails and underhung bridge cranes.

The bridge girder, underhung bridge crane runway beam and monorails shall be designed with sufficient strength and rigidity to prevent detrimental lateral deflection.

The lateral deflection should not exceed span/800 based on 5 percent of maximum wheel load(s) without vertical impact factor.

**Statutory Authority:** *MS s 16B.37; 16B.59 to 16B.76; 326B.101 to 326B.194*

**History:** *27 SR 1474; 32 SR 7; L 2007 c 140 art 4 s 61; art 13 s 4; L 2008 c 337 s 64*

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