

**MICHIGAN DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES
BUREAU OF SAFETY AND REGULATION
GENERAL INDUSTRY SAFETY DIVISION**

**Enforcement of General Industry Safety Standard
Part 18. Overhead and Gantry Cranes
R 408.11801 et seq.**

Revised August 9, 2002

This document provides clarification on application of selected rules contained in General Industry Safety Standard Part 18. Overhead and Gantry Cranes.

Background

On December 7, 1999, the General Industry Safety Standards Commission approved opening Part 18. Overhead and Gantry Cranes for updating and revision. The full promulgation process was followed, with amendments becoming effective on April 10, 2002.

Clarification on Application of Selected Rules

Scope - R 408.11801

This paragraph defines the range of equipment covered by the standard.

- Power-operated top running overhead and gantry single and multiple girder cranes are covered by the rules in this standard.
- Top running overhead cranes with push type-bridge and trolleys may be covered by the rules in this standard, as appropriate for accident investigations, complaints or under special circumstances.
- Monorails, railway or truck cranes, mine hoists, conveyors, shovels, drag-line excavators, equipment used on construction jobs, or systems used to transport people are not covered by the rules in this standard.

Employer responsibilities - R 408.11808

Paragraph (7) of this rule requires the manual provided by the crane manufacturer be readily accessible for the crane operator's reference at the work site. When no manual is available, the employer should determine whether it is possible for the employer to obtain a copy. If it is not possible to obtain a copy because the crane manufacturer is out of business, cannot be located, etc., the employer will be allowed to create a manual, obtain a manual for a similarly operating crane or another similar alternative as meeting the requirements of this rule.

Construction, installation, and equipment - R 408.11821

- Paragraphs (1), (2), (4), and (5) will be applied where facilities have equipment that is installed or erected after April 10, 2002.

Marking rated capacity; classifications; clearance - R 408.11822

- The employer must determine a service class rating and indicate this rating on the crane.
- Corrections in deviations from minimum clearances are expected when the deviation creates a hazard to employees.

Hooks; load blocks - R 408.11825

- When determining whether a hook latch is feasible, the employer must assess whether use of a latch would create a fall hazard or an appropriate means to access an elevation issue. If these hazards are created by use of hook latch, then a latch is impractical. The employer must also determine whether there are slack conditions in assessing whether this rule applies.
- Load blocks must have the sides enclosed.

Ladders; footwalks; stairways; escape devices - R 408.11835

- The anti-slip surface requirement for a footwalk can be met through the use of wood.

Brakes and restraints - R 408.11841

- The employer must ensure that appropriate braking means are provided for the trolley of a cab-operated crane where the cab is located on the trolley.

Controls - R 408.11843

- An off-point detent or off-point latch is a detent or latch that holds the lever in the off position. It would take a deliberate action of the operator to move the lever out of the "off" position but would not require the operator to hold the lever after that action.

Warning devices - R 408.11845

- A floor-operated pendant crane must be provided with a warning device when there is an obstruction in the operator's view or other hazard.

Training. Testing. Permits - R 408.11852, R 408.11853, R 408.11854

- The Consultation Education and Training (CET) Division is developing information and educational material for employers to use in their effort to comply with these new requirements. For further information on outreach material, contact (CET) at (517) 322-1809 or visit the website at www.michigan.gov/cis (select "Workplace Safety and Health" from the left navigation bar).

Frequent and periodic inspections - R 408.11872

- The employer must determine the crane usage by hours of service. Based on that determination, appropriate inspections must be completed.
- Frequent inspections require records. It is expected that records for the most recent two complete calendar years will be maintained.

Operational tests and rated load tests - R 408.11873 and R 408.11874

- 125% of the rated load or the load recommended by the manufacturer is acceptable.

Maintenance - R 408.11875

- To cite for lack of a permit for maintenance personnel, the compliance officer must document an actual instance where the maintenance personnel needs to operate the crane in order to perform the maintenance or repair functions.

For more information contact:

Consultation Education and Training Division (517) 322-1809
General Industry Safety Division (517) 322-1831

NOTE: Class codes as mentioned in General Industry Part 18. Overhead and Gantry Cranes in R 408.11822(2) and R 408.11872(2)(a).

Crane Manufacturer's of America Association #70

CRANE CLASSIFICATIONS

CLASS A (STANDBY OR INFREQUENT SERVICE)

This service class covers cranes that may be used in installation such as powerhouses, public utilities, turbine rooms, motor rooms and transformer stations where precise handling or equipment at slow speeds with long, idle periods between lifts are required. Capacity loads may be handled for initial installation of equipment and for infrequent maintenance.

CLASS B (LIGHT SERVICE)

This service covers cranes that may be used in repair shops, light assembly operations, service buildings, light warehousing, etc., where service requirements are light and the speed is slow. Loads may vary from no load to occasional full rated loads with 2 to 5 lifts per hour, averaging 10 feet per lift.

CLASS C (MODERATE SERVICE)

This service covers cranes that may be used in machine shops or papermill machine rooms, etc., where service requirements are moderate. In this type of service the crane will handle loads which average 50 percent of the rated load capacity with 5 to 10 lifts per hour, averaging 15 feet, not over 50 percent of the lift at rated capacity.

CLASS D (HEAVY SERVICE)

This service covers cranes that may be used in heavy machine shops, foundries, fabricating plants, steel warehouses, container yards, lumber mills, etc., and standard duty bucket and magnet operations where heavy duty production is required. In this type of service, loads approaching 50 percent of the rated capacity will be handled constantly during the working period. High speeds are desirable for this type of service with 10 to 20 lifts per hours averaging 15 feet, not over 85 percent of the lifts at rated capacity.

CLASS E (SEVERE SERVICE)

This type of service required a crane capable of handling loads approaching a rated capacity throughout its life. Applications may include magnet, bucket, magnet/bucket combination cranes for scrap yards, cement mills, lumber mills, fertilizer plants, container handling, etc., with twenty or more lifts per hour at or near the rated capacity.

CLASS F (CONTINUOUS SEVERE SERVICE)

This type of service requires a crane capable of handling loads approaching rated capacity continuously under severe service conditions throughout its life. Applications may include custom design specialty cranes essential to performing the critical work tasks affecting the total production facility. These cranes must provide the highest reliability with special attention to ease of maintenance features.