

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

GENERAL INDUSTRY SAFETY STANDARDS

**Filed with the Secretary of State on March 8, 2016**

These rules **become effective** ~~take effect~~ immediately upon filing with the Secretary of State unless adopted under ~~sections~~ **section** 33, 44, or 45a(6) of 1969 PA 306.

Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

(By authority conferred on the director of the department of licensing and regulatory affairs by sections 16 and 21 of 1974 PA 154, **MCL 408.1016 and 408.1021**, and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030)

R 408.10711, R 408.10712, R 408.10713, R 408.10727, and R 408.10753 are amended, and R 408.10702 is added, to the Michigan Administrative Code, as follows:

**PART 7. GUARDS FOR POWER TRANSMISSION**

**R 408.10702. Referenced standard.**

**Rule 702. The Michigan occupational safety and health standard General Industry Safety Standard Part 2 "Floor and Wall Openings, Stairways, and Skylights," R 408.10201 to R 408.10241, is referenced in these rules. Up to 5 copies of this standard may be obtained at no charge from the Michigan Department of Licensing and Regulatory Affairs, MIOSHA Regulatory Services Section, 530 West Allegan Street, P.O. Box 30643, Lansing, Michigan, 48909-8143 or via the internet at website: [www.michigan.gov/mioshastandards](http://www.michigan.gov/mioshastandards). For quantities greater than 5, the cost, at the time of adoption of these rules, is 4 cents per page.**

POWER TRANSMISSION EQUIPMENT

R 408.10711 Flywheels.

Rule 711. **An employer shall ensure that any** ~~Any~~ part of a flywheel 7 feet or less above the floor or platform ~~is shall~~ ~~be~~ guarded in 1 of the following ways:

(a) Enclosed by a ~~guard construction~~ **guard** pursuant to R 408.10751 to R 408.10754.

(b) With standard barriers and toeboards placed not less than 15, nor more than 20, inches from the rim of the flywheel pursuant to **General Industry Safety Standard Part 2 "Floor and Wall Openings, Stairways, and Skylights," as referenced in R 408.10702.** ~~rule 231 and subrule(2) of rule 233 of the general industry safety standards commission standard, Part 2. Floor and Wall Openings, Stairways, and Skylights, being R 408.10231 and R 408.10233(2) of the Michigan Administrative Code.~~

(c) The upper rim of a flywheel protruding through a working floor ~~is shall be~~ enclosed or surrounded by a standard barrier and toeboard pursuant to **General Industry Safety Standard Part 2 "Floor and Wall Openings, Stairways, and Skylights," as referenced in R 408.10702.** ~~rule 231 and subrule(2) of rule 233 of the general industry safety standards commission standard, Part 2. Floor and Wall Openings, Stairways, and Skylights, being R 408.10231 and R 408.10233(2) of the Michigan Administrative Code.~~

(d) A flywheel with a smooth rim 5 feet or less in diameter may be guarded pursuant to R 408.10756.

R 408.10712 Cranks and connecting rods.

Rule 712. A crank and a connecting rod, if exposed to contact, shall be guarded pursuant to R 408.10751 to R 408.10754 or by a standard barrier pursuant to **General Industry Safety Standard Part 2 "Floor and Wall Openings, Stairways, and Skylights," as referenced in R 408.10702.** ~~rule 231 of the general industry safety standards commission standard, Part 2. Floor and Wall Openings, Stairways, and Skylights, being R 408.10231 of the Michigan Administrative Code.~~

R 408.10713 Tail rods and extension piston rods.

Rule 713. Tail rods and extension piston rods exposed to contact shall be guarded pursuant to R 408.10751 to R 408.10754 or by a standard barrier pursuant to **General Industry Safety Standard Part 2 "Floor and Wall Openings, Stairways, and Skylights," as referenced in R 408.10702,** ~~rule 231 of the general industry safety standards commission standard, Part 2. Floor and Wall Openings, Stairways, and Skylights, being R 408.10231 of the Michigan Administrative Code,~~ which allows a clearance of not less than 15, nor more than 20, inches from the fully extended tail rod or extension piston rod.

R 408.10727 Belts.

Rule 727. (1) A belt and pulley ~~that which~~ is 7 feet or less above the floor or platform and ~~that which~~ is exposed to contact shall be guarded pursuant to R 408.10751 to R 408.10754. In a power plant or power-development room, a standard barrier and toeboard may be used pursuant to **General Industry Safety Standard Part 2 “Floor and Wall Openings, Stairways, and Skylights,” as referenced in R 408.10702.** ~~rule 231 and subrule(2) of rule 233 of the general industry safety standards commission standard, Part 2. Floor and Wall Openings, Stairways, and Skylights, being R 408.10231 and R 408.10233(2) of the Michigan Administrative Code.~~

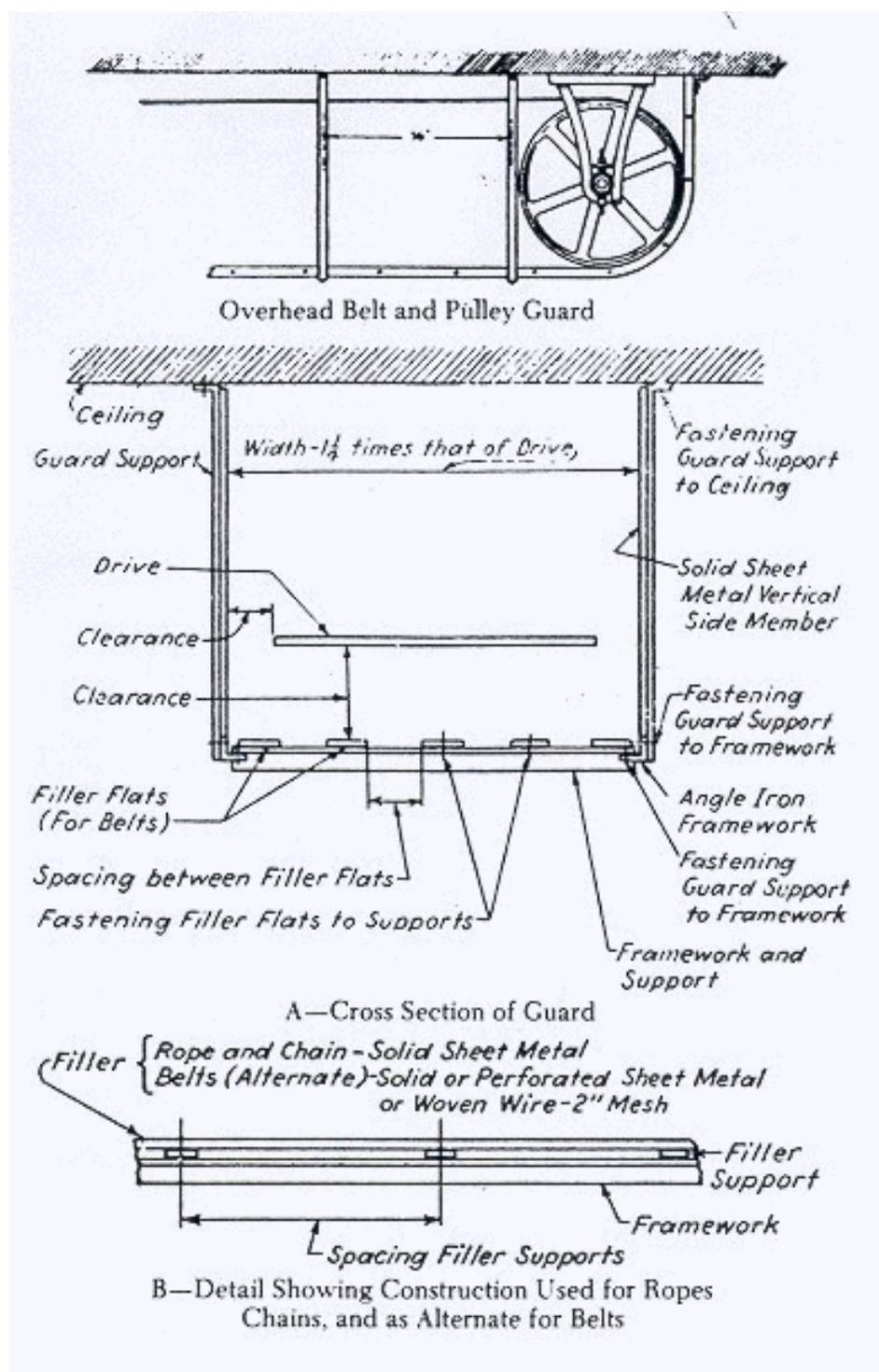
(2) A horizontal belt more than 7 feet above the floor or platform shall be guarded for its entire length if located over a passageway or work place pursuant to R 408.10753 and figure 2 **contained in subrule (5) of this rule.**

(3) A passageway between horizontal belts shall have a lower run guarded by a platform ~~that which~~ is provided with a standard barrier and toeboard pursuant to **General Industry Safety Standard Part 2 “Floor and Wall Openings, Stairways, and Skylights,” as referenced in R 408.10702,** ~~rule 231 and subrule(2) of rule 233 of the general industry safety standards commission standard, Part 2. Floor and Wall Openings, Stairways, and Skylights, being R 408.10231 and R 408.10233(2) of the Michigan Administrative Code,~~ and the upper run guarded **pursuant to subrule (2) of this rule.** ~~pursuant to R 408.10727(2).~~

(4) A vertical or inclined belt running over a lower pulley more than 7 feet above the floor or platform and located over a passageway or work place shall be guarded **pursuant to subrule (2) of this rule.** ~~pursuant to R 408.10727(2).~~

(5) Figure 2 reads as follows:

FIGURE 2 Figure for R-408.10727



R 408.10753 Materials.

Rule 753.(1) Wood guards may be used if the presence of fumes or if manufacturing conditions cause rapid deterioration of metal guards, in construction work, and in locations outdoors if extreme cold or extreme heat makes metal guards and railings undesirable.

(2) Material sizes and clearances shall be pursuant to table A. See **Figure figures 2, and Appendices A and B. 3, and 4.**

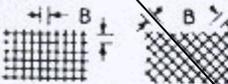
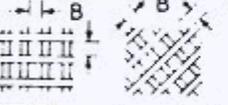
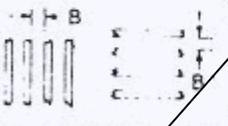
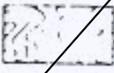
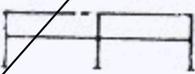
(3) Table A reads as follows:

**TABLE A  
STANDARD MATERIALS AND DIMENSIONS FOR MACHINERY GUARDS**

<b>Size and Clearance of Filler Materials</b>			
<b>Material</b>	<b>Clearance From Moving Part At All Points (Inches)</b>	<b>Largest Mesh or Opening Allowable B (Inches)</b>	<b>Minimum Gauge (U.S. Standard) Or Thickness</b>
<b>Woven Wire</b>	Under 2 2-4 4-15	3/8 1/2 2	No. 16-1/8 In. No. 16-1/2 No. 12-2
<b>Expanded Metal</b>	Under 4 4-15	1/2 2	No. 18-1/2 In. No. 13-2
<b>Perforated Metal</b>	Under 4 4-15	1/2 2	No. 20-1/2 In. No. 14-2
<b>Sheet Metal</b>	Under 4 4-15	---	No. 22 No. 22
<b>Wood Or Metal Strips Crossed</b>	} Under 4 4-15	1/2 2	} 3/4 In. Wood Or No. 16 Metal
<b>Wood Or Metal Strips Not Crossed</b>	} Under 4 4-15	1/2 The Width One Width	
<b>Plywood, Plastic Or Equivalent</b>	Under 4 4-15	---	1/4 In. 1/4 In.
<b>Standard Railing</b>	Min. 15 Max. 20	---	---

Figure for R-408-10753

**TABLE A**  
Standard Materials and Dimensions for Machinery Guards  
Size and Clearance of Filler Materials

Material	Clearance from Moving Part at All Points (inches)	Largest Mesh or Opening Allowable B (inches)	Minimum Gauge (U.S. Standard) or Thickness
 Woven Wire	Under 2 2-4 4-15	$\frac{3}{8}$ $\frac{1}{2}$ 2	No. 16 - $\frac{3}{8}$ in. No. 16 - $\frac{1}{2}$ No. 12 - 2
 Expanded Metal	Under 4 4-15	$\frac{1}{4}$ 2	No. 18 - $\frac{1}{4}$ in. No. 13 - 2
 Perforated Metal	Under 4 4-15	$\frac{1}{4}$ 2	No. 20 - $\frac{1}{4}$ in. No. 14 - 2
 Sheet Metal	Under 4 4-15	...	No. 22 No. 22
 Wood or Metal Strips Crossed	Under 4 4-15	$\frac{3}{8}$ 2	} $\frac{3}{8}$ in. wood or No. 16 metal
 Wood or Metal Strips Not Crossed	Under 4 4-15	$\frac{1}{4}$ the width One width	
 Plywood, Plastic or Equivalent	Under 4 4-15	...	$\frac{1}{4}$ in. $\frac{3}{8}$ in.
 Standard Railing	Min. 15 Max. 20	...	...