DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

OCCUPATIONAL HEALTH STANDARDS

(By authority conferred on the director of the department of licensing and regulatory affairs by sections 14 and 24 of 1974 PA 154, MCL 408.1014 and 408.1024 and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030)

PART 621. HEALTH HAZARD CONTROL FOR SPECIFIC EQUIPMENT AND OPERATIONS FOR CONSTRUCTION

R 325.62102. Adopted and referenced standards.

Rule 62102. (1) The following standard is adopted by reference in these rules, American Welding Society Standard AWS Z49.1 'Safety in Welding and Cutting, and Allied Processes,' 1967 edition, and is available from IHS Global, 15 Inverness Way East, Englewood, Colorado, 80112, USA, telephone number: 1-800-854-7179 or via the internet at website: http://global.ihs.com; at a cost as of the time of adoption of these rules of $106.00.

(2) The standard adopted in subrule (1) of this rule is also available for inspection at the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143.

(3) Copies of the standard adopted in subrule (1) of this rule may be obtained from the publisher or may also be obtained from the Department of Licensing and Regulatory Affairs, MIOSHA Regulatory Services Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143, at the cost charged in subrule (1) of this rule, plus $20.00 for shipping and handling.

(4) The following Michigan occupational safety and health standards are referenced in these rules. Up to 5 copies of these standards may be obtained at no charge from the Michigan Department of Licensing and Regulatory Affairs, MIOSHA Regulatory Services Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143 or via the internet at web-site: www.michigan.gov/mioshastandards. For quantities greater than 5, the cost, as of the time of adoption of these rules, is 4 cents per page.

(a) Construction Safety (CS) Standard Part 1 'General Rules,' R 408.40101 to R 408.40134.

(b) CS Part 6 'Personal Protective Equipment,' R 408.40601 to R 408.40641.

(c) CS Part 42 'Hazard Communication,' R 408.44201 to R 408.44203.

(d) General Industry Safety Standard Part 76 'Spray Finishing Using Flammable and Combustible Materials,' R 408.17601 to R 408.17602.

(e) Occupational Health (OH) Standard Part 303 'Methylenedianiline,' R 325.50051 to R 325.50076.

(f) OH Part 305 'Asbestos in General Industry,' R 325.51311 to R 325.51312.

(g) OH Part 430 'Hazard Communication,' R 325.77001 to R 325.77003.

(h) OH Part 432 ‘Hazardous Waste Operations and Emergency Response,’ R 325.52101 to R 325.52137.

(i) OH Part 451 ‘Respiratory Protection,’ R 325.60051 to R 325.60052.

(j) OH Part 591 ‘Process Safety Management of Highly Hazardous Chemicals,’ R 325.18301 to R 325.18302.

(k) OH Part 601 ‘Air Contaminants for Construction,’ R 325.60151 to R 325.60161.

(l) OH Part 603 ‘Lead Exposure in Construction,’ R 325.51991 to R 325.51992.

(m) OH Part 620 ‘Ventilation Control for Construction,’ R 325.62001 to R 325.62006.

(n) OH Part 680 ‘Noise Exposure for Construction,’ R 325.60131.

(o) OH Part 681 ‘Radiation of Construction: Ionizing and Nonionizing,’ R 325.68101 to R 325.68102.

History: 2014 AACS.

R 325.62104. Temporary heating devices; ventilation.

Rule 62104. (1) An employer shall supply fresh air in sufficient quantities to maintain the health and safety of employees. Where natural means of fresh air supply is inadequate, the employer shall provide mechanical ventilation.

(2) When heaters are used in confined spaces, the employer shall ensure sufficient ventilation for proper combustion, maintaining the health and safety of employees, and limiting temperature rise in the area.

History: 2014 AACS.

R 325.62105. Use of hand and power tools.

Rule 62105. (1) All hand and power tools and similar equipment, whether furnished by the employer or the employee, shall be maintained in a safe condition.

(2) Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dusts, fumes, mists, vapors, or gases shall be provided with the particular personal protective equipment necessary to protect them from the hazard.

All personal protective equipment shall meet the requirements and be maintained according to the MIOSHA standards listed in Table 1 ‘Construction Occupational Health and Environmental Controls’ and Table 2 ‘Personal Protective and Life Saving Equipment,’ as shown below.

(3) When fuel-powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment apply, as outlined in the MIOSHA standards listed in Table 1 ‘Construction Occupational Health and Environmental Controls’ and Table 2 ‘Personal Protective and Life Saving Equipment,’ as shown below.

(4) All Personal protective equipment provided for use shall be in accordance with Table 2 ‘Personal Protective and Life Saving Equipment,’ as shown below.

Table 1
Construction Occupational Health and Environmental Controls Standards

CS Part 1 General Rules
CS Part 42 Hazard Communication*
GI Part 76 Spray Finishing Using Flammable and Combustible Materials*
OH Part 303 Methylenedianiline*
OH Part 430 Hazard Communication
OH Part 432 Hazardous Waste Operations and Emergency Response
OH Part 591 Process Safety Management of Highly Hazardous Chemicals
OH Part 601 Air Contaminants for Construction
OH Part 603 Lead Exposure in Construction
OH Part 620 Ventilation Control for Construction
OH Part 680 Noise Exposure for Construction
OH Part 681 Radiation of Construction: Ionizing and Nonionizing

Note: the above listed MIOSHA Standards are referenced in R 325.62102
*CS – Construction Safety Standard
*GI – General Industry Standard
*OH – Occupational Health Standard

Table 2
Personal Protective and Life Saving Equipment

CS Part 6 Personal Protective Equipment*
OH Part 451 Respiratory Protection*
OH Part 680 Noise Exposure for Construction

Note: the above listed MIOSHA Standards are referenced in R 325.62102
*CS – Construction Safety Standard
*OH – Occupational Health Standard

History: 2014 AACS.

R 325.62106. Ventilation and protection in welding, cutting, and heating.

Rule 62106. (1) Gas welding and cutting in general. The applicable technical portions of American National Standards Institute standard ANSI Z49.1 'Safety in Welding and Cutting,' 1967 edition, apply, as referenced in R 325.62102.

(2) For purposes of this standard, mechanical ventilation shall meet the following requirements:

(a) Mechanical ventilation shall consist of either general mechanical ventilation systems or local exhaust systems.

(b) General mechanical ventilation shall be of sufficient capacity and so arranged as to produce the number of air changes necessary to maintain welding fumes and smoke within safe limits, as defined in the MIOSHA standards listed in Table 1 'Construction Occupational Health and Environmental Controls.'

(3) Local exhaust ventilation shall consist of freely movable hoods intended to be placed by the welder or burner as close as practicable to the work. This system shall be of sufficient

capacity and so arranged as to remove fumes and smoke at the source and keep the concentration of them in the breathing zone within safe limits as defined in the MIOSHA standards listed in Table 1 'Construction Occupational Health and Environmental Controls.'

(4) Contaminated air exhausted from a working space shall be discharged into the open air or otherwise clear of the source of intake air.

(5) All air replacing withdrawn air shall be clean and respirable.

(6) Oxygen shall not be used for ventilation purposes, comfort cooling, blowing dust from clothing, or for cleaning the work area.

History: 2014 AACS.

R 325.62107. Welding, cutting, and heating in confined spaces.

Rule 62107. (1) Except as provided in subrule (2) of this rule and R 325.62109, either general mechanical or local exhaust ventilation meeting the requirements of R 325.62106 shall be provided whenever welding, cutting, or heating is performed in a confined space.

(2) When sufficient ventilation cannot be obtained without blocking the means of access, employees in the confined space shall be protected by air-line respirators in accordance with the requirements of Occupational Health Standard Part 451 'Respiratory Protection,' as referenced in R 325.62102, and an employee on the outside of a confined space shall be assigned to maintain communication with those working within it and to aid them in an emergency.

History: 2014 AACS.

R 325.62108. Welding, cutting, or heating of metals of toxic significance.

Rule 62108. (1) Welding, cutting, or heating in any enclosed spaces involving the following metals shall be performed with either general mechanical or local exhaust ventilation meeting the requirements of R 325.62106:

(a) Zinc-bearing base or filler metals or metals coated with zinc-bearing materials.

(b) Lead base metals.

(c) Cadmium-bearing filler materials.

(d) Chromium-bearing metals or metals coated with chromium-bearing materials.

(2) Welding, cutting, or heating in any enclosed spaces involving the following metals shall be performed with local exhaust ventilation in accordance with the requirements of R 325.62106, or employees shall be protected by air-line respirators in accordance with the requirements of Occupational Health Standard Part 451 'Respiratory Protection,' as referenced in R 325.62102:

(a) Metals containing lead, other than as an impurity, or metals coated with lead-bearing materials.

(b) Cadmium-bearing or cadmium-coated base metals.

(c) Metals coated with mercury-bearing metals.

(d) Beryllium-containing base or filler metals. Because of its high toxicity, work involving beryllium shall be done with both local exhaust ventilation and air-line respirators.

(3) Employees performing operations in the open air shall be protected by filter-type respirators in accordance with the requirements of Occupational Health Standard Part 451

‘Respiratory Protection,’ except that employees performing operations on beryllium-containing base or filler metals shall be protected by air-line respirators in accordance with the requirements of Occupational Health Standard Part 451 ‘Respiratory Protection,’ as referenced in R 325.62102.

(4) Other employees exposed to the same atmosphere as the welders or burners shall be protected in the same manner as the welder or burner.

History: 2014 AACS.

R 325.62109. Inert-gas metal-arc welding.

Rule 62109. (1) Since the inert-gas metal-arc welding process involves the production of ultra-violet radiation of intensities of 5 to 30 times that produced during shielded metal-arc welding, the decomposition of chlorinated solvents by ultra-violet rays, and the liberation of toxic fumes and gases, employees shall not be permitted to engage in, or be exposed to, the process until the following special precautions have been taken:

(a) The use of chlorinated solvents shall be kept at least 200 feet, unless shielded, from the exposed arc, and surfaces prepared with chlorinated solvents shall be thoroughly dry before welding is permitted on such surfaces.

(b) Welders and other employees who are exposed to radiation shall be suitably protected so that the skin is covered completely to prevent burns and other damage by ultra-violet rays. Welding helmets and hand shields shall be free of leaks and openings, and free of highly reflective surfaces.

(c) When inert-gas metal-arc welding is being performed on stainless steel, the requirements of R 325.62108(2) shall be met to protect against dangerous concentrations of nitrogen dioxide.

(2) Employees in the area not protected from the arc by screening shall be protected by filter lenses meeting the requirements of Construction Safety Standard Part 6 ‘Personal Protective Equipment’ as referenced in R 325.62102.

(3) When 2 or more welders are exposed to each other's arc, filter lens goggles of a suitable type, meeting the requirements of Construction Safety Standard Part 6 ‘Personal Protective Equipment’ as referenced in R 325.62102, shall be worn under welding helmets.

(4) The welder shall use hand shields to protect against flashes and radiant energy when either the helmet is lifted or the shield is removed.

History: 2014 AACS.

R 325.62110. General welding, cutting, and heating.

Rule 62110. Welding, cutting, and heating, not involving conditions or materials described in R 325.62107, R 325.62108, or R 325.62109, may be done without mechanical ventilation or respiratory protective equipment, but where, because of unusual physical or atmospheric conditions, an unsafe accumulation of contaminants exists, an employer shall provide suitable mechanical ventilation or respiratory protective equipment.

History: 2014 AACS.

R 325.62115. Protection against toxic preservative coatings.

Rule 62115. (1) In enclosed spaces, all surfaces covered with toxic preservatives shall be stripped of all toxic coatings for a distance of at least 4 inches from the area of heat application, or the employees shall be protected by air-line respirators, meeting the requirements in Occupational Health Standard Part 451 'Respiratory Protection,' as referenced in R 325.62102.

(2) In the open air, employees shall be protected by a respirator, in accordance with requirements in Occupational Health Standard Part 451 'Respiratory Protection,' as referenced in R 325.62102.

(3) The preservative coatings shall be removed a sufficient distance from the area to be heated to ensure that the temperature of the unstripped metal will not be appreciably raised. Artificial cooling of the metal surrounding the heating area may be used to limit the size of the area required to be cleaned.

History: 2014 AACS.

R 325.62116. Lockout and tagging of circuits.

Rule 62116. Safety-related work practices are contained in Construction Safety Standards Part 1 'General Rules' and Part 17 'Electrical Installations,' as referenced in R 325.62102. In addition to covering the hazards arising from the use of electricity at jobsites, these regulations also cover the hazards arising from the accidental contact, direct or indirect, by employees with all energized lines, above or below ground, passing through or near the jobsite.

History: 2014 AACS.

R 325.62117. Electrical Equipment.

Rule 62117. (1) All electrical conductors and equipment shall be approved.

(2) The employer shall ensure that electrical equipment is free from recognized hazards that are likely to cause death or serious physical harm to employees. Safety of equipment shall be determined on the basis of all of the following considerations:

(a) Suitability for installation and use in conformity with the provisions of Construction Safety Standards Part 1 'General Rules' and Part 17 'Electrical Installations,' as referenced in R 325.62102. Suitability of equipment for an identified purpose may be evidenced by listing, labeling, or certification for that identified purpose.

(b) Mechanical strength and durability, including, for parts designed to enclose and protect other equipment, the adequacy of the protection provided.

(c) Electrical insulation.

(d) Heating effects under conditions of use.

(e) Arcing effects.

(f) Classification by type, size, voltage, current capacity, and specific use.

(g) Other factors that contribute to the practical safeguarding of employees using, or likely to come in contact, with the equipment.

(3) Listed, labeled, or certified equipment shall be installed and used in accordance with instructions included in the listing, labeling, or certification.

History: 2014 AACS.

R 325.62118. Cranes and derricks.

Rule 62118. Whenever internal combustion engine powered equipment exhausts in enclosed spaces, tests shall be made and recorded to ensure that employees are not exposed to unsafe concentrations of toxic gases or oxygen deficient atmospheres.

History: 2014 AACS.

R 325.62119. Motor vehicles, mechanized equipment, and marine operations.

Rule 62119. (1) The use, care, and charging of all batteries shall conform to the requirements of R 325.62117.

(2) For marine operations and equipment the first aid and lifesaving equipment provisions for rendering first aid and medical assistance shall be in accordance with Construction Safety Standards Part 1 'General Rules,' and Part 6 'Personal Protective Equipment' as referenced in R 325.62102.

History: 2014 AACS.

R 325.62120. Demolition; preparatory operations.

Rule 62120. An employer shall determine if any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property. When the presence of any of these substances is apparent or suspected, testing and purging shall be performed and the hazard eliminated before demolition is started.

History: 2014 AACS.

R 325.62125. Power transmission and distribution.

Rule 62125. (1) The occupational health standards contained in these rules apply to the construction of electric transmission and distribution lines and equipment.

(2) As used in this rule, the term "construction" includes the erection of new electric transmission and distribution lines and equipment, and the alteration, conversion, and improvement of existing electric transmission and distribution lines and equipment.

(3) Existing electric transmission and distribution lines and electrical equipment shall be modified to conform to the requirements of applicable standards, if work as described in R 325.62125(2) is to be performed on such lines or equipment.

(4) The standards in Construction Safety Standard Part 16 'Power Transmission and Distribution,' provide minimum requirements for safety and health. Employers may require

compliance with additional standards that are not in conflict with Construction Safety Standard Part 16 'Power Transmission and Distribution,' as referenced in R 325.62102.

(5) The employer shall provide emergency procedures and first aid training or require that the employees are knowledgeable and proficient in both of the following:

(a) Procedures involving emergency situations.

(b) First aid fundamentals including resuscitation.

(6) In lieu of R 325.62125(5) regarding first aid requirements, the employer may comply with the provisions of Construction Safety Standard Part 1 'General Rules,' as referenced in R 325.62102.

(7) Sanitation facilities shall comply with the requirements of Construction Safety Standard Part 1 'General Rules,' as referenced in R 325.62102.

History: 2014 AACS.

R 325.62126. Blasting and use of explosives.

Rule 62126. (1) Explosives are any of the following:

(a) Any chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion; that is, with substantially instantaneous release of gas and heat, unless such compound, mixture, or device is otherwise specifically classified by the United States department of transportation.

(b) All material that is classified as Class A, Class B, and Class C explosives by the United States Department of Transportation.

(c) Classification of explosives by the United States department of transportation is as follows:

(i) Class A explosives: Possessing detonating hazards, such as any of the following:

(A) Dynamite.

(B) Nitroglycerin.

(C) Picric acid.

(D) Lead azide.

(E) Fulminate of mercury.

(F) Black powder.

(G) Blasting caps.

(H) Detonating primers.

(ii) Class B explosives: Possessing flammable hazard, such as propellant explosives, including some smokeless propellants.

(iii) Class C explosives: Including certain types of manufactured articles that contain Class A or Class B explosives, or both, as components, but in restricted quantities.

(2) Sufficient time shall be allowed, but not less than 15 minutes in tunnels, for the smoke and fumes to leave the blasted area before returning to the shot. The blaster shall inspect the area and the surrounding rubble to determine if all charges have been exploded before employees are allowed to return to the operation and in tunnels, after the muck pile has been wetted down.

History: 2014 AACS.