

Proposed Amendments (added text to the code is: <u>underlined</u> , deleted text to the code is: struck through)				
ITEM NUMBER	ARTICLE	SUMMARY	PROPONENT	ACTION
		Proposed		
IFC – 2023 - 1	IFC - 202	Revise Section 202 to read as follows DESCRIPTION: IFC Section 202 FLAMMABLE GAS. A material which is a gas at 68°F (20°C) or less at 14.7 pounds per square inch atmosphere (psia) (101 kPa) of pressure [a material that has a boiling point of 68°F (20°C) or less at 14.7 psia (101 kPa)] which <u>subdivided as follows:</u> 1. <u>Category 1A</u> 1. <u>A gas which is ignitable at 14.7 psia (101 kPa) when in a mixture of 13 percent or less by volume with air; or</u> 2. <u>Has A gas with a flammable range at 14.7 psia (101 kPa) with air of not less than 12 percent, regardless of the lower limit.</u> <u>unless data shows compliance with Category 1B</u> 2. <u>Category 1B.</u> <u>A gas which meets the flammability criteria for Category 1A, is not pyrophoric or chemically unstable, and meets one or more of the following:</u> 1. <u>A lower flammability limit of more than 6% by volume of air; or</u> 2. <u>A fundamental burning velocity of less than 3.9 in/s (10 cm/s).</u> The limits specified shall be determined at 14.7 psi (101 kPa) of pressure and a temperature of 68°F (20°C) in accordance with ASTM E681. Where not otherwise specified, the term "flammable gas" includes both Category 1A and 1B.	Mary Koban	Forward to SFM

*Note: These amendments are “proposed only” and have not been adopted by the Department of Community Affairs.

ACTION: A (Approve as Submitted); R (Approve as Revised); D (Disapprove); W (Withdrawn); CF (Carry Forward)

IFC – 2023 - 2	IFC – 608	<p>Revise the following sections to read as follows</p> <p>IFC Revise as follows: 608.9 Refrigerant detection. Machinery rooms shall be provided with a refrigerant detector with an audible and visible alarm. Where ammonia is used as the refrigerant, detection shall comply with IAR 2. For refrigerants other than ammonia, refrigerant detection shall comply with Section 608.9.1. <u>A detector, or a sampling tube that draws air to a detector, shall be provided at an approved location where refrigerant from a leak is expected to accumulate. The system shall be designed to initiate audible and visible alarms inside of and outside each entrance to the refrigerating machinery room and transmit a signal to an approved location where the concentration of refrigerant detected exceeds the lesser of the following:</u></p> <ol style="list-style-type: none"> <u>1. The corresponding TLV-TWA values shown in the International Mechanical Code for the refrigerant classification.</u> <u>2. Twenty-five percent of the lower flammable limit (LFL).</u> <p><u>Detection of a refrigerant concentration exceeding the upper detection limit or 25 percent of the lower flammable limit (LFL), whichever is lower, shall stop refrigerant equipment in the machinery room in accordance with Section 608.10.1.</u></p> <p>Delete without substitution: 608.9.1 Refrigerants other than ammonia. A detector, or a sampling tube that draws air to a detector, shall be provided at an approved location where refrigerant from a leak is expected to accumulate. The system shall be designed to initiate audible and visible alarms inside of and outside each entrance to the refrigerating machinery room and transmit a signal to an approved location where the concentration of refrigerant detected exceeds the lesser of the following:</p> <ol style="list-style-type: none"> 1. The corresponding TLV-TWA values shown in the International Mechanical Code for the refrigerant classification. 2. Twenty five percent of the lower flammable limit (LFL). <p>Detection of a refrigerant concentration exceeding the upper detection limit or 25 percent of the lower flammable limit (LFL), whichever is lower, shall stop refrigerant equipment in the machinery room in accordance with Section 608.10.1.</p> <p>Revise as follows: 608.11 Emergency pressure control system. Permanently installed refrigeration systems in machinery rooms containing more than 6.6 pounds (3 kg) of flammable, toxic or highly toxic refrigerant or ammonia shall be provided with an emergency pressure control system in accordance with Sections 608.11.1 and 608.11.2.</p> <p>608.13 Discharge and termination of pressure relief and purge systems. Pressure relief devices, fusible plugs and</p>	Mary Koban	<p>Forward to SFM</p>
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		<p>purge systems discharging to the atmosphere from refrigeration systems containing flammable, toxic or highly toxic refrigerants or ammonia shall comply with Sections 608.13.2 through 608.13.4 and 608.13.3.</p> <p>608.13.2 Flammable refrigerants. Systems containing more than 6.6 pounds (3 kg) of flammable refrigerants having a density equal to or greater than the density of air shall discharge vapor to the atmosphere only through an approved treatment system in accordance with Section 608.13.5 <u>608.13.4</u> or a flaring system in accordance with Section 608.13.6 <u>608.13.5</u> . Systems containing more than 6.6 pounds (3 kg) of flammable refrigerants having a density less than the density of air shall be permitted to discharge vapor to the atmosphere provided that the point of discharge is located outside of the structure at not less than 15 feet (4572 mm) above the adjoining grade level and not less than 20 feet (6096 mm) from any window, ventilation opening or exit.</p> <p>608.13.3 Toxic and highly toxic refrigerants. Systems containing more than 6.6 pounds (3 kg) of toxic or highly toxic refrigerants shall discharge vapor to the atmosphere only through an approved treatment system in accordance with Section 608.13.5 <u>608.13.4</u> or a flaring system in accordance with Section 608.13.6 <u>608.13.5</u>.</p> <p>Delete without substitution: 608.13.4 Ammonia refrigerant. Systems containing more than 6.6 pounds (3 kg) of ammonia refrigerant shall discharge vapor to the atmosphere in accordance with one of the following methods: 1. Directly to atmosphere where the fire code official determines, on review of an analysis prepared in accordance with Section 104.8.2, that a health hazard would not result from atmospheric discharge of ammonia. 2. Through an approved treatment system in accordance with Section 608.13.5. 3. Through a flaring system in accordance with Section 608.13.6. 4. Through an approved ammonia diffusion system in accordance with Section 608.13.7. 5. By other approved means. Exception: Ammonia/water absorption systems containing less than 22 pounds (10 kg) of ammonia and for which the ammonia circuit is located entirely outdoors.</p> <p>Revise as follows:</p>		
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		<p>608.13.4 608.13.5 Treatment systems. Treatment systems shall be designed to reduce the allowable discharge concentration of the refrigerant gas to not more than 50 percent of the IDLH at the point of exhaust. Treatment systems shall be in accordance with Chapter 60.</p> <p>608.13.5 608.13.6 Flaring systems. Flaring systems for incineration of flammable refrigerants shall be designed to incinerate the entire discharge. The products of refrigerant incineration shall not pose health or environmental hazards. Incineration shall be automatic upon initiation of discharge, shall be designed to prevent blowback and shall not expose structures or materials to threat of fire. Standby fuel, such as LP-gas, and standby power shall have the capacity to operate for one and one-half the required time for complete incineration of refrigerant in the system. Standby electrical power, where required to complete the incineration process, shall be in accordance with Section 1203.</p> <p>Delete without substitution: 608.13.7 Ammonia diffusion systems. Ammonia diffusion systems shall include a tank containing 1 gallon of water for each pound of ammonia (8.3 L of water for each 1 kg of ammonia) that will be released in 1 hour from the largest relief device connected to the discharge pipe. The water shall be prevented from freezing. The discharge pipe from the pressure relief device shall distribute ammonia in the bottom of the tank, but not lower than 33 feet (10 058 mm) below the maximum liquid level. The tank shall contain the volume of water and ammonia without overflowing.</p> <p>Revise as follows: 608.14 Mechanical ventilation exhaust. Exhaust from mechanical ventilation systems serving refrigeration machinery rooms containing flammable, toxic or highly toxic refrigerants, other than ammonia, capable of exceeding 25 percent of the LFL or 50 percent of the IDLH shall be equipped with approved treatment systems to reduce the discharge concentrations to those values or lower. Exception: Refrigeration systems containing Group A2L complying with Section 608.18.</p>		
IFC – 2023 - 3	IFC – 608.17	Revise Section 608 to read as follows IFC Section 608	Mary Koban	Forward to SFM

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		<p>[M]608.17 Electrical equipment. Where refrigerant of Groups A2, A3, B2 and B3, as defined in the International Mechanical Code, are used, refrigeration machinery rooms shall conform to the Class I, Division 2, hazardous location classification requirements of NFPA 70.</p> <p>Exceptions:</p> <p>1. Ammonia machinery rooms that are provided with ventilation in accordance with Section 1101.1.2, Exception 1 of the International Mechanical Code.</p> <p>2. Machinery rooms for systems containing Group A2L refrigerants that are provided with ventilation in accordance with Section 608.18.</p>																			
<p>IFC – 2023 - 4</p>	<p>IFC – Table 911.1</p>	<p>Revise Table 911.1 to read as follows</p> <p>DESCRIPTION</p> <p>IFC TABLE 911.1 EXPLOSION CONTROL REQUIREMENTS Portions of table not shown remain unchanged.</p> <table border="1" data-bbox="562 899 1591 1097"> <thead> <tr> <th rowspan="2">MATERIAL</th> <th rowspan="2">CLASS</th> <th colspan="2">EXPLOSION CONTROL METHODS</th> </tr> <tr> <th>Barricade construction</th> <th>Explosion (deflagration) venting or explosion (deflagration) prevention systems</th> </tr> <tr> <th colspan="4">Hazard Category</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Flammable gas</td> <td>Gaseous</td> <td>Not required</td> <td>Required^d</td> </tr> <tr> <td>Liquefied</td> <td>Not required</td> <td>Required^d</td> </tr> </tbody> </table> <p>a. Combustible dusts where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 104.8.2. See definition of “Combustible dust” in Chapter 2.</p> <p>b. Storage or use.</p> <p>c. In open use or dispensing.</p> <p>d. Rooms containing dispensing and use of hazardous materials where an explosive environment can occur because of the characteristics or nature of the hazardous materials or as a result of the</p>	MATERIAL	CLASS	EXPLOSION CONTROL METHODS		Barricade construction	Explosion (deflagration) venting or explosion (deflagration) prevention systems	Hazard Category				Flammable gas	Gaseous	Not required	Required ^d	Liquefied	Not required	Required ^d	<p>Mary Koban</p>	<p>Forward to SFM</p>
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		<p>dispensing or use process.</p> <p>e. A method of explosion control shall be provided where Class 2 water-reactive materials can form potentially explosive mixtures.</p> <p>f. Explosion venting is not required for Group H-5 Fabrication Areas complying with Chapter 27 and the International Building Code.</p> <p>g. Where explosion control is required in Section 1207.6.3.</p> <p>h. <u>Not required for Category 1B Flammable Gases having a burning velocity not exceeding 3.9 in/s (10 cm/s).</u></p> <p>3307.2.1 Pipe cleaning and purging. The cleaning and purging of flammable gas piping systems, including cleaning new or existing piping systems, purging piping systems into service and purging piping systems out of service, shall comply with NFPA 56.</p> <p>Exceptions:</p> <ol style="list-style-type: none">1. Compressed gas piping systems other than fuel gas piping systems where in accordance with Chapter 53.2. Piping systems regulated by the International Fuel Gas Code.3. Liquefied petroleum gas systems in accordance with Chapter 61.4. <u>Cleaning and purging of refrigerant piping systems shall comply with the International Mechanical Code.</u>		

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