ANSI/ASHRAE Addendum i to ANSI/ASHRAE Standard 15-2019

Safety Standard for Refrigeration Systems


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FOREWORD

Addendum i modifies ASHRAE Standard 15 by making necessary changes to defer regulation of ammonia refrigeration to ANSI/IIAR 2 (see Section 2.3). Addenda d and h to ASHRAE Standard 15-2016 inadvertently added references to ammonia, after Addendum a to ASHRAE Standard 15-2016 had already been published to remove ammonia refrigeration from ASHRAE Standard 15. Further, in editing the 2019 edition, some of the modifications of Addendum a to ASHRAE Standard 15-2016 were missed. This addendum removes the added and erroneous references to ammonia.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum i to Standard 15-2019

Modify Section 7 as shown. The remainder of Section 7 remains unchanged.

7. RESTRICTIONS ON REFRIGERANT USE

[...]

<table>
<thead>
<tr>
<th>Table 7-1. Special Quantity Limits for Sealed Ammonia/Water Absorption and Self-Contained Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Refrigeration System</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Sealed Ammonia/Water Absorption System</td>
</tr>
<tr>
<td>In public hallways or lobbies</td>
</tr>
<tr>
<td>In adjacent outdoor locations</td>
</tr>
<tr>
<td>In other than public hallways or lobbies</td>
</tr>
<tr>
<td>Unit Systems</td>
</tr>
<tr>
<td>In other than public hallways or lobbies</td>
</tr>
</tbody>
</table>

[...]

7.4 Location in a Machinery Room or Outdoors. All components containing refrigerant shall be located either in a machinery room or outdoors, where the quantity of refrigerant needed exceeds the limits defined by Section 7.2 and Section 7.3 or where direct-fired absorption equipment is used.

Exceptions to 7.4:

1. Self-contained systems are permitted outside of a machinery room, provided that such systems are not located in public hallways or lobbies and are limited to the following occupancies and refrigerant quantities:
   a. 6.6 pounds (3 kg) of refrigerant where located in residential occupancies.
   b. 22 pounds (10 kg) of refrigerant where located in commercial occupancies.

2. Sealed absorption systems not exceeding the refrigerant quantity limits indicated in Table 7-1.

7.4.1 Direct-fired absorption equipment shall be located in a machinery room or outdoors.

[...]

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7.4.3 Flammable Refrigerants. Machinery rooms required by Section 7.4 based on flammability shall be constructed and maintained in accordance with Sections 8.11 and 8.12 for Group A2, A3, B2, and B3 refrigerants. Machinery rooms required by Section 7.4 based on flammability shall be constructed and maintained in accordance with Sections 8.11.1 through 8.11.5 and Section 8.13 for Group A2L and B2L refrigerants, other than R-717 (ammonia).

Modify Section 8 as shown. The remainder of Section 8 remains unchanged.

8. INSTALLATION RESTRICTIONS

[ . . . ]

Exceptions to 8.11.5:

1. Detectors are not required when only systems using R-718 (water) are located in the refrigerating machinery room.
2. For Group A2L and B2L other than ammonia, refer to Section 8.13.

[ . . . ]

8.11.8 Ventilation Airflow. For Group A1, A2, A3, B1, B2, and B3, the airflow shall comply with Section 8.11.8.1. For Group A2L and B2L other than R-717 (ammonia), the airflow shall comply with Section 8.13.

[ . . . ]

8.13 Machinery Room, A2L and B2L Other than R-717 (Ammonia). When required by Section 7.4.2, machinery rooms shall comply with Sections 8.13.1 through 8.13.6.

[ . . . ]

8.13.6 When any refrigerant of Groups A2, A3, B2, or B3 are used, the machinery room shall be designated as Class I, Division 2 hazardous (classified) electrical location in accordance with the National Electric Code. When the only flammable refrigerants used are from Group A2L or B2L other than R-717 (ammonia), the machinery room shall comply with both Section 8.13.6.1 for ventilation and Section 8.13.6.2 for refrigerant detection, or shall be designated as Class I, Division 2 hazardous (classified) electrical location in accordance with the National Electrical Code.

[ . . . ]

8.13.11.4 Safety Group A2L, B2L Other than Ammonia. When required by Section 8.13.11.3, the total airflow for Level 2 ventilation shall be not less than the airflow rate determined by Figure 8-1 (I-P) or Figure 8-2 (SI).

Modify Informative Appendix A as shown. The remainder of Informative Appendix A remains unchanged.

INFORMATIVE APPENDIX A

INFORMATIVE REFERENCES

This appendix contains a full list of informative references only. A full list of normative references is included in Normative Appendix B. References in this standard are numbered in the order in which they appear in the document, so the numbers for the normative references are shown for the convenience of the user.

ASHRAE is concerned with the impact of its members’ activities on both the indoor and outdoor environment. ASHRAE’s members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE’s short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its Handbook, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system’s intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE’s primary concern for environmental impact will be at the site where equipment within ASHRAE’s scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.
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