

# BSR/IIAR 4-202X

## Installation of Closed-Circuit Ammonia Refrigeration Systems

### IIAR 4 Public Review #3 Draft

Following are supplementary instructions for submitting comments:

- 1) Provide all of the commenter's contact information [e.g. name, phone number(s), and e-mail].
- 2) Identify the specific Section (i.e. by its Chapter and Section number) that is the subject of each comment(s). Only sections with changes resulting from Public Review #1 comments (and enough content for understanding) are in this draft. Only ~~striked-through~~ or underlined items can be commented on.
- 3) Provide specific wording changes or action that would resolve the commenter's concern(s). Additions should be shown by underlining and deletions by strikethrough (i.e. Addition: include this, Deletion: ~~remove this~~), unless clearly shown in another method.
- 4) Provide a brief substantiation statement that presents the rationale, justification, and supporting documentation; as well as any technical data and backup. Provide an abstract for lengthy substantiations. If supplementary documents are provided to support your comment(s), electronic files in word processed (MS Word preferred) or scanned form are preferred. Indicate whether attachments have been provided. Highlighting pens should not be used since highlighted text will not reproduce.
- 5) If you do not understand the material, proceed with doing the necessary homework to gain understanding of the material and/or call the IIAR to discuss before commenting. Do not submit comments as opinions or questions.

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## Part 2 Installation Requirements

### Chapter 4. General Requirements

#### 4.2 Installer Qualifications

- 4.2.2 Contractors and employees who are in training may participate in the installation provided they are working under the direct supervision of those meeting the requirement of Section 4.2.1.

#### 4.3 Safety Training

- 4.3.1 All individuals participating in the installation shall be ~~trained in~~ provided with an orientation on safety procedures provided by the owner and installer prior to participating in the installation. Individuals performing installation shall follow the safety rules of the facility, including the required safe work practices.

#### 4.5 Welding of Pressure Containing Components

- 4.5.2 ~~Contractor(s) shall provide to the owner the verification of non-expiration of the Welder and Welding Performance Qualification Records (WPQRs) for WPQRs the past six (6) months of the initial qualification for each welder.~~

Welder Performance Qualification (WPQ) records shall be provided to the owner for each welder.

#### 4.6 Welding of Structural Supports

- 4.6.2 ~~Contractor(s) shall provide to the owner the verification of non-expiration of the Welder and Welding Performance Qualification Records (WPQRs) for WPQRs the past six (6) months of the initial qualification for each welder.~~

Welder Performance Qualification (WPQ) records shall be provided to the owner for each welder.

#### 4.7 Materials

- 4.7.1 **General.** All materials used in the pressure containing envelope that will be exposed to ammonia ~~during normal operation~~ shall be suitable for ammonia refrigerant at the coincident temperature and pressure to which the component shall be subjected. No materials in the pressure containing envelope shall be used that will deteriorate in the presence of ammonia refrigerant, lubricating oil, or a combination of both.

- 4.8.5.1 Rigging devices shall be rated for the intended load and inspected for defects, such as ~~k~~nicks, frays, kinks, cuts, or abrasions. Rigging devices that are identified with indications of defects shall not be used and retired.

## Chapter 7. Components and Controls Installation

This section applies to components and controls ~~applied~~ for use in closed-circuit ammonia refrigeration systems.

## Appendix A. (Informative) Explanatory Material

**A.6.1.4** For pressure testing, see ASME B31.5. When utilized, hot tapping procedures can be provided by the hot tap equipment manufacturer. Verifying the integrity of a closure weld can be in accordance with ASME B31.5 or see ANSI/IIAR 5-2019, which provides an NDE option. Also ~~and as usual~~, site specific work practices should be implemented where applicable.

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