



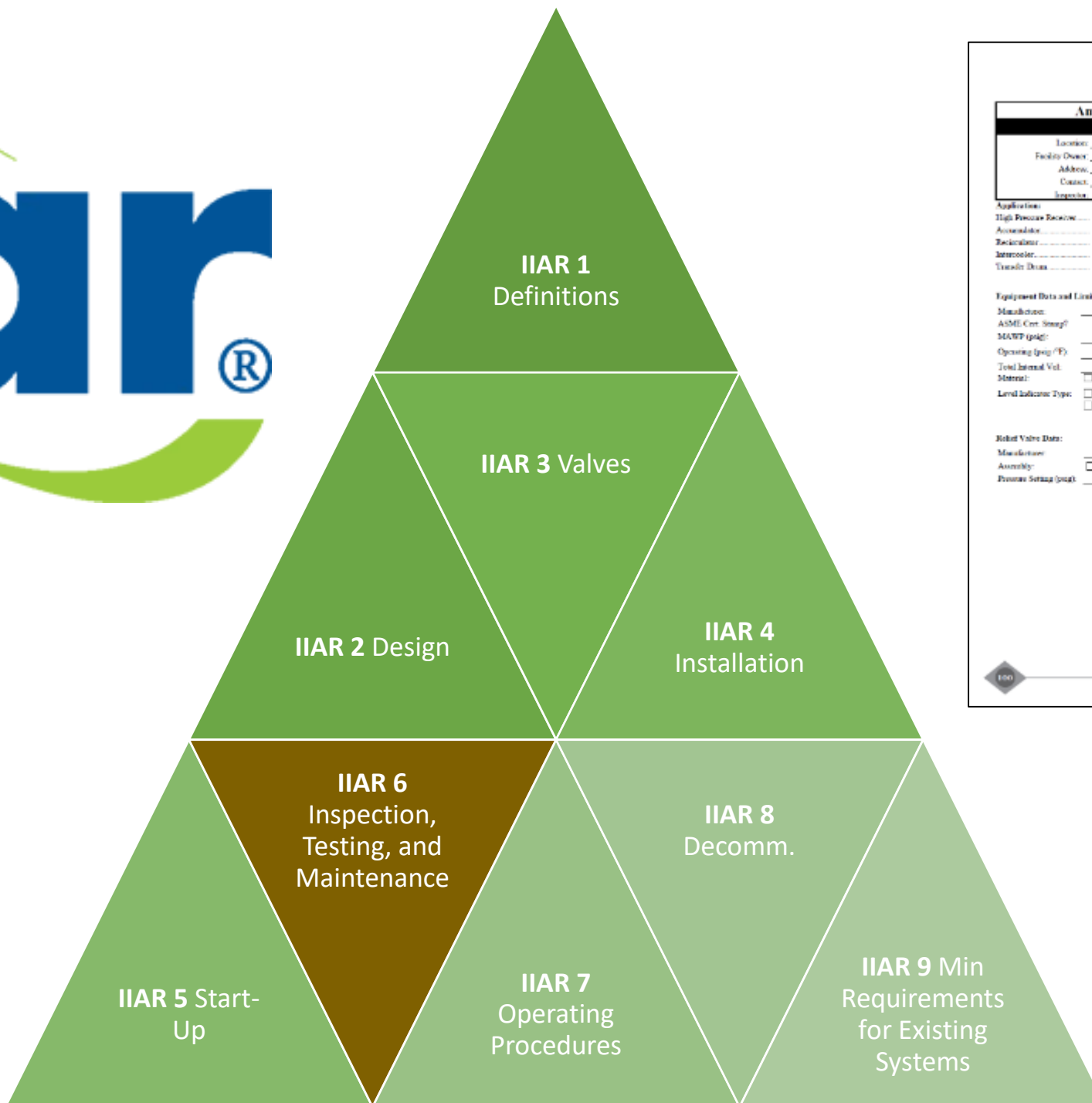
# Mechanical Integrity Inspection of a Pressure Vessel

Peter Thomas, P.E.



# Mechanical Integrity Inspection of a Pressure Vessel

Peter Thomas, P.E.



Ammonia Refrigeration Safety Inspection Checklist		
PRESSURE VESSELS		
Location: _____	ID Tag No: _____	
Facility Owner: _____		
Address: _____		
Contact: _____	Phone: _____	
Inspector: _____	Date: _____	
<b>Applications:</b>		
High Pressure Receiver <input type="checkbox"/>	Oil Separator <input type="checkbox"/>	Orientation: _____
Accumulator <input type="checkbox"/>	Oil Pot <input type="checkbox"/>	Horizontal <input type="checkbox"/>
Evaporator <input type="checkbox"/>	Choke (Discharge) <input type="checkbox"/>	Vertical <input type="checkbox"/>
Intercooler <input type="checkbox"/>		
Transfer Drum <input type="checkbox"/>		
<b>Equipment Data and Limits:</b>		
Manufacturer: _____	Model #: _____	Serial #: _____
ASME Cert Stamp? <input type="checkbox"/> Yes <input type="checkbox"/> No	Year Mfg: _____	Nominal Boil-off: _____
MAWP (psig): _____	@ °F: _____	MDM (°F): _____
Operating (psig) (°F): _____		Nominal Liquid Level: _____
Total Internal Vol: _____ Cu. Ft.	Nominal Ammonia Inventory (lbs.): _____	
Material: <input type="checkbox"/> Carbon Steel <input type="checkbox"/> Stainless Steel <input type="checkbox"/> Aluminum <input type="checkbox"/> Other: _____		
Level Indicate Type: <input type="checkbox"/> None <input type="checkbox"/> Annular Bellows <input type="checkbox"/> Level Column w/ Bellows <input type="checkbox"/> Flat Annular		
<input type="checkbox"/> Level Column Only <input type="checkbox"/> Level Column w/ Vent/Tech Level		
<b>Relief Valve Data:</b>		
Manufacturer: _____	Model: _____	Year Installed: _____
Assembly: <input type="checkbox"/> Dual exchange over valve <input type="checkbox"/> Single	Type of Relief Valve: <input type="checkbox"/> Internal <input type="checkbox"/> External	
Pressure Setting (psig): _____	Capacity (lbs. or gal. per min @ 230°F): _____	

100

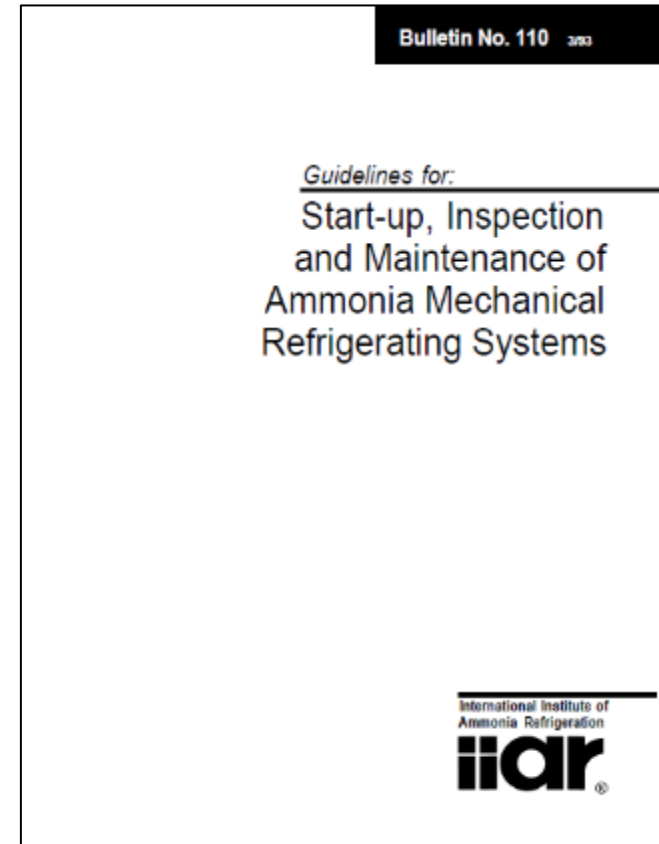
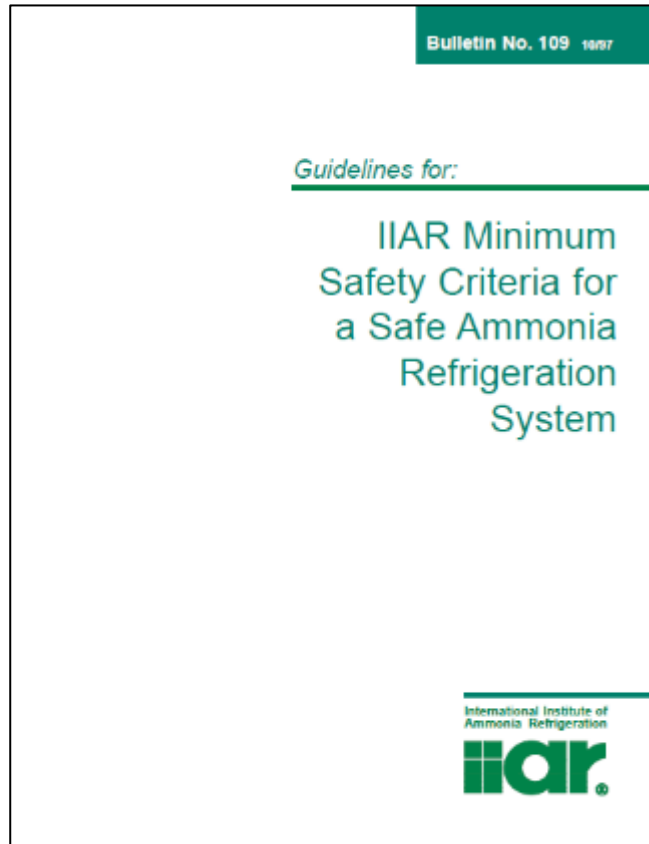
Revised and reissued by Ammonia Refrigeration

# History of IIAR 6

- IIAR Bulletin No. 107 *Guidelines for: Suggested Safety and Operating Procedures When Making Ammonia Refrigeration Plant Tie-ins*
- IIAR Bulletin No. 108 *Guidelines for: Water Contamination in Ammonia Refrigeration Systems*
- IIAR Bulletin No. 109 *Guidelines for: IIAR Minimum Safety Criteria for a Safe Ammonia Refrigeration System*
- IIAR Bulletin No. 110 *Guidelines for: Start-up, Inspection and Maintenance of Ammonia Mechanical Refrigerating Systems*
- IIAR Bulletin No. 111 *Guidelines for: Ammonia Machinery Room Ventilation*
- IIAR Bulletin No. 112 *Guidelines for: Ammonia Machinery Room Design*
- IIAR Bulletin No. 114 *Guidelines for: Identification of Ammonia Refrigeration Piping and System Components*
- IIAR Bulletin No. 116 *Guidelines for: Avoiding Component Failure in Industrial Refrigeration Systems Caked by Abnormal Pressure or Shock*
- IIAR Bulletin No. R1 *A Guide to: Good Practices for the Operation of an Ammonia Refrigeration System*

# History of IIAR 6

---



## Ammonia Refrigeration Safety Inspection Checklist

ID Number: \_\_\_\_\_

### PRESSURE VESSELS

Plant Owner: \_\_\_\_\_

Address: \_\_\_\_\_

Contact: \_\_\_\_\_ Telephone: \_\_\_\_\_

Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

#### Pressure Vessel

Vessel Location: \_\_\_\_\_

Vessel Identification Mark/No.: \_\_\_\_\_

#### Application

High Pressure Receiver     Intercooler     Accumulator     Oil Pot  
 Pump Receiver, Low Temp     Pump Receiver, High Temp     Other (Describe) \_\_\_\_\_

#### Application Data

Normal Operating Pressure (psig): \_\_\_\_\_ Temperature (°F): \_\_\_\_\_

Vessel Size (Diam. x L/H, ft): \_\_\_\_\_ Normal Liquid Level (ft): \_\_\_\_\_

Normal Ammonia Inventory (cubic ft): \_\_\_\_\_

Design Capacity (Specify: Pumpdown, Surge Vol., TR, etc.): \_\_\_\_\_

#### Vessel Nameplate Data

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_

Year Manufactured: \_\_\_\_\_ Max. Design Working Pressure (psig): \_\_\_\_\_

Maximum Allowable Pressure (psig): \_\_\_\_\_ At (°F): \_\_\_\_\_

Minimum Design Metal Temperature (°F): \_\_\_\_\_ At (psig): \_\_\_\_\_

Test Pressure Applied (psig): \_\_\_\_\_

National Board No.: \_\_\_\_\_ ASME Certification Stamp?  Yes  No

#### Safety Relief Valve Data

Type:  Dual  Single  None

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_

Year Manufactured or Recertified: \_\_\_\_\_ ASME Seal Unbroken?  Yes  No

Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air/min): \_\_\_\_\_

Valve Connections:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_ Pipe Size:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_

Is Valve Properly Installed and Piped to Termination?  Yes  No

If No, Explain: \_\_\_\_\_

#### Visual Liquid Level Indicator

Tubular     Flat Armored     Armored Bullseye     High Pressure Industrial     None

ID Number: \_\_\_\_\_

### PRESSURE VESSELS

Requirement/Recommendation	Conforms	Recommended Action/Comments	Safety Status	Target Date
a) Nameplate legible and complete?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
b) Operating within limitations:				
1) Maximum pressure?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2) Minimum temperature?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
c) Vessel ASME stamp legible?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
d) Certification drawings on file?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
e) Manufacturer data report on file?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
f) Does vessel have known alterations/modifications?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
1) If yes, was vessel recertified?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2) Is revised data report on file?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
g) Relief valve:				
1) Proper type?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2) Correct setting?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
3) Capacity correct?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
4) Installation correct?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
5) Piping to termination correct?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
6) Relief valve replaced or recertified within last 5 years of service?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
7) ASME seal unbroken?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
h) Tubular linear liquid level indicator (sight glass):				
1) Protected from traffic hazards?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2) 360° guards?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
3) Internal check shutoff valves?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
i) Vessel properly identified? (Name, pressure level per IIAR Bulletin 114)	<input type="checkbox"/> Yes <input type="checkbox"/> No			

j) Vessel condition (check one):  no visible corrosion     slight visible corrosion     extensive corrosion     unknown (insulated)

k) Insulation condition (check one):  no vapor retarder leaks     slight vapor retarder leaks     extensive vapor retarder leaks  
 not insulated

l) Relief valve condition (check one):  clean, no visible corrosion     slight external corrosion     extensive corrosion

Are there any other conditions that might negatively affect safe vessel operation?  Yes  No

If yes, describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Revision to Bulletin 110

(Approved by IIAR Board of Directors June 19, 2007)

### 6.6.3 Pressure Relief Devices

Pressure-relief devices are generally one of two types: rupture discs or spring-loaded valves. Rupture discs are membranes that open at a set pressure and cannot reseal. Once ruptured, these devices must be replaced.

Spring-loaded relief valves open to relieve pressure when a set pressure is exceeded. After opening, these valves are designed to re-seat when pressure in the protected component drops below the valve's closing pressure. If a spring-loaded relief valve opens, the valve shall be replaced or recertified in a safe and timely manner. If re-seating is not complete, the valve shall be taken out of service immediately.

Relief valve vent lines shall be visually inspected annually to ensure that the vent line piping is intact and that vent outlets terminated to atmosphere are unobstructed and piped to prevent foreign matter from entering the vent line piping. If equipped, drip pockets shall be checked for water accumulation.

Pressure relief devices shall be replaced or recertified in accordance with one of these three options:

- 1) Every five (5) years from the date of installation.

IIAR originally recommended (in 1978) that pressure relief valves be replaced every five years from the date of installation. This recommendation represents good engineering practice considering the design and performance of pressure relief devices; or

- 2) An alternative to the prescriptive replacement interval, i.e., five years, can be developed based on documented in-service relief valve life for specific applications using industry accepted good practices of relief valve evaluation; or
- 3) The manufacturer's recommendations on replacement frequency of pressure relief devices shall be followed.

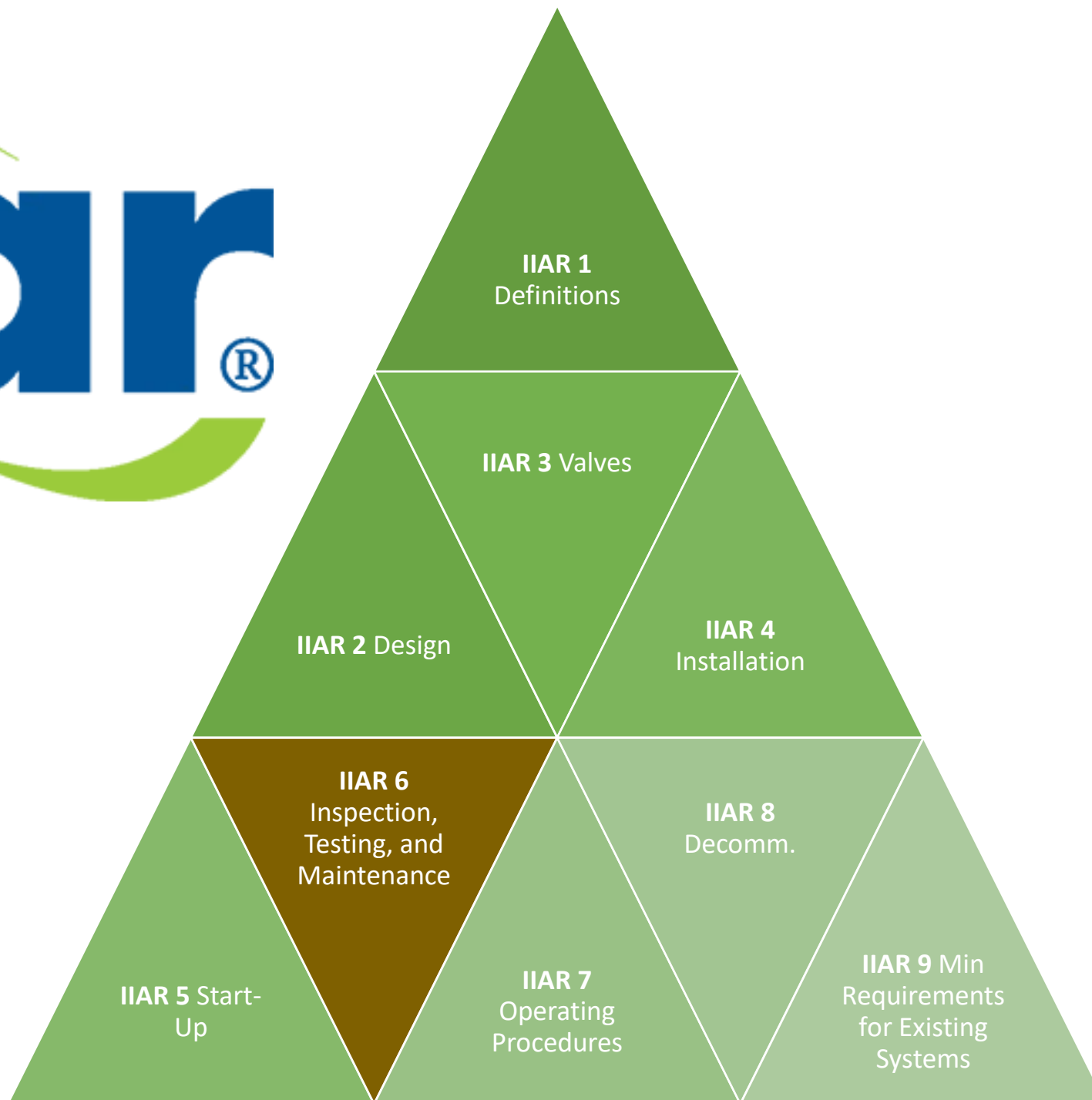
Exception: Relief devices discharging into another part of the closed-loop refrigeration system are not subject to the relief valve replacement practices.

All replacement pressure-relief devices shall be correctly selected in accordance with current editions of ANSI/IIAR 2 and ANSI/ASHRAE 15.

# IIAR Literature - Bulletins

- IIAR Bulletin No. 110 §6.4.2 [emphasis mine]:
- *The system should be checked regularly for the presence of non-condensable gases which should be purged as necessary from the receiver(s) and/or condenser(s), preferably into a noncondensable gas remover or purger but alternatively into water. Where an automatic purger is fitted, its correct operation should be monitored. If there is a large accumulation of noncondensable gases the reason should be investigated and the cause should be corrected.*





**IIAR 1**  
Definitions

**IIAR 3** Valves

**IIAR 2** Design

**IIAR 4**  
Installation

**IIAR 6**  
Inspection,  
Testing, and  
Maintenance

**IIAR 8**  
Decomm.

**IIAR 5** Start-  
Up

**IIAR 7**  
Operating  
Procedures

**IIAR 9** Min  
Requirements  
for Existing  
Systems

# IIAR 6

## Part 1 – General

## Part 2 – Program Requirement

## Part 3 Appendices

1 – Purpose, Scope, and Applic.

2 – Definitions

3 – Reference Standards

4 – Program Administration

5 – General

6 – Compressors

7 – Pumps

8 – Condensers

9 – Evaporators

10 – Vessels

11 – Piping

12 – Safety Systems

13 – Overpressure Protection Devices

14 - Purgers

15 – Ammonia and Secondary Coolants

A – Explanatory Material

B – Safety Checklists

C – Water Contamination

D – Avoiding Abnormal Pressure/Shock

E – Risk-Based ITM

F - References

# IIAR 6

## Part 1 – General

## Part 2 – Program Requirement

## Part 3 Appendices

1 – Purpose, Scope, and Applic.

2 – Definitions

3 – Reference Standards

4 – Program Administration

5 – General

6 – Compressors

7 – Pumps

8 – Condensers

9 – Evaporators

10 – Vessels

11 – Piping

12 – Safety Systems

13 – Overpressure Protection Devices

14 - Purgers

15 – Ammonia and Secondary Coolants

A – Explanatory Material

B – Safety Checklists

C – Water Contamination

D – Avoiding Abnormal Pressure/Shock

E – Risk-Based ITM

F – References

## PRESSURE VESSELS

Plant Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Pressure Vessel

Vessel Location: \_\_\_\_\_  
 Vessel Identification Mark/No.: \_\_\_\_\_

### Application

High Pressure Receiver     Intercooler     Accumulator     Oil Pot  
 Pump Receiver, Low Temp     Pump Receiver, High Temp     Other (Describe) \_\_\_\_\_

### Application Data

Normal Operating Pressure (psig): \_\_\_\_\_ Temperature (°F): \_\_\_\_\_  
 Vessel Size (Diam. x LH, ft): \_\_\_\_\_ Normal Liquid Level (ft): \_\_\_\_\_  
 Normal Ammonia Inventory (cubic ft): \_\_\_\_\_  
 Design Capacity (Specify: Pumpdown, Surge Vol., TR, etc.): \_\_\_\_\_

### Vessel Nameplate Data

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured: \_\_\_\_\_ Max. Design Working Pressure (psig): \_\_\_\_\_  
 Maximum Allowable Pressure (psig): \_\_\_\_\_ At (°F): \_\_\_\_\_  
 Minimum Design Metal Temperature (°F): \_\_\_\_\_ At (psig): \_\_\_\_\_  
 Test Pressure Applied (psig): \_\_\_\_\_  
 National Board No.: \_\_\_\_\_ ASME Certification Stamp?  Yes  No

### Safety Relief Valve Data

Type:  Dual  Single  None  
 Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured or Recertified: \_\_\_\_\_ ASME Seal Unbroken?  Yes  No  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air/min): \_\_\_\_\_  
 Valve Connections:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_ Pipe Size:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_  
 Is Valve Properly Installed and Piped to Termination?  Yes  No

If No, Explain:

**IIAR Bulletin No. 109**

None  None  None  None  None  None  None  None

# Ammonia Refrigeration Safety Inspection Checklist

## PRESSURE VESSELS

Location: \_\_\_\_\_ ID/Tag No.: \_\_\_\_\_  
 Facility Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation.....
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

### Equipment Data and Limits:

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No    Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig / °F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol: \_\_\_\_\_ Cu. Ft.    Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

### Relief Valve Data:

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single    Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

**IIAR Standard 6**

ID Number: \_\_\_\_\_

## PRESSURE VESSELS

Plant Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Pressure Vessel

Vessel Location: \_\_\_\_\_  
 Vessel Identification Mark/No.: \_\_\_\_\_

### Application

High Pressure Receiver     Intercooler     Accumulator     Oil Pot  
 Pump Receiver, Low Temp     Pump Receiver, High Temp     Other (Describe) \_\_\_\_\_

### Application Data

Normal Operating Pressure (psig): \_\_\_\_\_ Temperature (°F): \_\_\_\_\_  
 Vessel Size (Diam. x LH, ft): \_\_\_\_\_ Normal Liquid Level (ft): \_\_\_\_\_  
 Normal Ammonia Inventory (cubic ft): \_\_\_\_\_  
 Design Capacity (Specify: Pumpdowns, Surge Vol., TR, etc.): \_\_\_\_\_

### Vessel Nameplate Data

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured: \_\_\_\_\_ Max. Design Working Pressure (psig): \_\_\_\_\_  
 Maximum Allowable Pressure (psig): \_\_\_\_\_ At (°F): \_\_\_\_\_  
 Minimum Design Metal Temperature (°F): \_\_\_\_\_ At (psig): \_\_\_\_\_  
 Test Pressure Applied (psig): \_\_\_\_\_  
 National Board No.: \_\_\_\_\_ ASME Certification Stamp?  Yes  No

### Safety Relief Valve Data

Type:  Dual  Single  None  
 Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured or Recertified: \_\_\_\_\_ ASME Seal Unbroken?  Yes  No  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air/min): \_\_\_\_\_  
 Valve Connections:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_ Pipe Size:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_  
 Is Valve Properly Installed and Piped to Termination?  Yes  No

If No, Explain:

**IIAR Bulletin No. 109**

None  None  None  None  None  None  None  None  None  None

# Ammonia Refrigeration Safety Inspection Checklist

## PRESSURE VESSELS

Location: \_\_\_\_\_ ID/Tag No.: \_\_\_\_\_  
 Facility Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Application:

High Pressure Receiver     Oil Separator     Orientation: \_\_\_\_\_  
 Accumulator     Oil Pot     Horizontal     Vertical   
 Recirculator     Other (Describe)  \_\_\_\_\_  
 Intercooler  \_\_\_\_\_  
 Transfer Drum  \_\_\_\_\_

### Equipment Data and Limits:

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No    Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig / °F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol: \_\_\_\_\_ Cu. Ft.    Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

### Relief Valve Data:

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single    Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

**IIAR Standard 6**

ID Number: \_\_\_\_\_

## PRESSURE VESSELS

Plant Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Pressure Vessel

Vessel Location: \_\_\_\_\_  
 Vessel Identification Mark/No.: \_\_\_\_\_

### Application

- High Pressure Receiver     Intercooler     Accumulator     Oil Pot  
 Pump Receiver, Low Temp     Pump Receiver, High Temp     Other (Describe) \_\_\_\_\_

### Application Data

Normal Operating Pressure (psig): \_\_\_\_\_ Temperature (°F): \_\_\_\_\_  
 Vessel Size (Diam. x L/H, ft): \_\_\_\_\_ Normal Liquid Level (ft): \_\_\_\_\_  
 Normal Ammonia Inventory (cubic ft): \_\_\_\_\_  
 Design Capacity (Specify: Pumpdown, Surge Vol., TR, etc.): \_\_\_\_\_

### Vessel Nameplate Data

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured: \_\_\_\_\_ Max. Design Working Pressure (psig): \_\_\_\_\_  
 Maximum Allowable Pressure (psig): \_\_\_\_\_ At (°F): \_\_\_\_\_  
 Minimum Design Metal Temperature (°F): \_\_\_\_\_ At (psig): \_\_\_\_\_  
 Test Pressure Applied (psig): \_\_\_\_\_  
 National Board No.: \_\_\_\_\_ ASME Certification Stamp?  Yes  No

### Safety Relief Valve Data

Type:  Dual  Single  None  
 Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured or Recertified: \_\_\_\_\_ ASME Seal Unbroken?  Yes  No  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air/min): \_\_\_\_\_  
 Valve Connections:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_ Pipe Size:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_  
 Is Valve Properly Installed and Piped to Termination?  Yes  No

If No, Explain:

**IIAR Bulletin No. 109**

Accumulator     Non-Armored     Armored Bullseye     High Pressure Industrial     None

# Ammonia Refrigeration Safety Inspection Checklist

## PRESSURE VESSELS

Location: \_\_\_\_\_ ID/Tag No.: \_\_\_\_\_  
 Facility Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Application:

- |  |  |  |
|--|--|--|
| High Pressure Receiver..... <input type="checkbox"/> | Oil Separator..... <input type="checkbox"/>    | Orientation:                             |
| Accumulator..... <input type="checkbox"/>            | Oil Pot..... <input type="checkbox"/>          | Horizontal..... <input type="checkbox"/> |
| Recirculator..... <input type="checkbox"/>           | Other (Describe)..... <input type="checkbox"/> | Vertical..... <input type="checkbox"/>   |
| Intercooler..... <input type="checkbox"/>            |  |  |
| Transfer Drum..... <input type="checkbox"/>          |  |  |

### Equipment Data and Limits:

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No    Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig / °F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol: \_\_\_\_\_ Cu. Ft.    Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

### Relief Valve Data:

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single    Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

**IIAR Standard 6**

ID Number: \_\_\_\_\_

## PRESSURE VESSELS

Plant Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Pressure Vessel

Vessel Location: \_\_\_\_\_  
 Vessel Identification Mark/No.: \_\_\_\_\_

### Application

High Pressure Receiver     Intercooler     Accumulator     Oil Pot  
 Pump Receiver, Low Temp     Pump Receiver, High Temp     Other (Describe) \_\_\_\_\_

### Application Data

Normal Operating Pressure (psig): \_\_\_\_\_ Temperature (°F): \_\_\_\_\_  
 Vessel Size (Diam. x LH, ft): \_\_\_\_\_ Normal Liquid Level (ft): \_\_\_\_\_  
 Normal Ammonia Inventory (cubic ft): \_\_\_\_\_  
 Design Capacity (Specify: Pumpdown, Surge Vol., TR, etc.): \_\_\_\_\_

### Vessel Nameplate Data

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured: \_\_\_\_\_ Max. Design Working Pressure (psig): \_\_\_\_\_  
 Maximum Allowable Pressure (psig): \_\_\_\_\_ At (°F): \_\_\_\_\_  
 Minimum Design Metal Temperature (°F): \_\_\_\_\_ At (psig): \_\_\_\_\_  
 Test Pressure Applied (psig): \_\_\_\_\_  
 National Board No.: \_\_\_\_\_ ASME Certification Stamp?  Yes  No

### Safety Relief Valve Data

Type:  Dual  Single  None  
 Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured or Recertified: \_\_\_\_\_ ASME Seal Unbroken?  Yes  No  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air/min): \_\_\_\_\_  
 Valve Connections:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_ Pipe Size:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_  
 Is Valve Properly Installed and Piped to Termination?  Yes  No

If No, Explain: \_\_\_\_\_

**IIAR Bulletin No. 109**

None  None  None  None  None  None  None  None  None  None

# Ammonia Refrigeration Safety Inspection Checklist

## PRESSURE VESSELS

Location: \_\_\_\_\_ ID/Tag No.: \_\_\_\_\_  
 Facility Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Application:

High Pressure Receiver  Oil Separator   
 Accumulator  Oil Pot   
 Recirculator  Other (Describe)   
 Intercooler   
 Transfer Drum

### Orientation:

Horizontal   
 Vertical

### Equipment Data and Limits:

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig / °F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol: \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

### Relief Valve Data:

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

**IIAR Standard 6**



ID Number: \_\_\_\_\_

## PRESSURE VESSELS

Plant Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Pressure Vessel

Vessel Location: \_\_\_\_\_  
 Vessel Identification Mark/No.: \_\_\_\_\_

### Application

High Pressure Receiver     Intercooler     Accumulator     Oil Pot  
 Pump Receiver, Low Temp     Pump Receiver, High Temp     Other (Describe) \_\_\_\_\_

### Application Data

Normal Operating Pressure (psig): \_\_\_\_\_ Temperature (°F): \_\_\_\_\_  
 Vessel Size (Diam. x L/H, ft): \_\_\_\_\_ Normal Liquid Level (ft): \_\_\_\_\_  
 Normal Ammonia Inventory (cubic ft): \_\_\_\_\_  
 Design Capacity (Specify: Pumpdowns, Surge Vol., TR, etc.): \_\_\_\_\_

### Vessel Nameplate Data

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured: \_\_\_\_\_ Max. Design Working Pressure (psig): \_\_\_\_\_  
 Maximum Allowable Pressure (psig): \_\_\_\_\_ At (°F): \_\_\_\_\_  
 Minimum Design Metal Temperature (°F): \_\_\_\_\_ At (psig): \_\_\_\_\_  
 Test Pressure Applied (psig): \_\_\_\_\_  
 National Board No.: \_\_\_\_\_ ASME Certification Stamp?  Yes  No

### Safety Relief Valve Data

Type:  Dual  Single  None  
 Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured or Recertified: \_\_\_\_\_ ASME Seal Unbroken?  Yes  No  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air/min): \_\_\_\_\_  
 Valve Connections:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_ Pipe Size:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_  
 Is Valve Properly Installed and Piped to Termination?  Yes  No

If No, Explain:

**IIAR Bulletin No. 109**

None  None  None  None  None  None  None  None  None  None

# Ammonia Refrigeration Safety Inspection Checklist

## PRESSURE VESSELS

Location: \_\_\_\_\_ ID/Tag No.: \_\_\_\_\_  
 Facility Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Application:

High Pressure Receiver     Oil Separator     Orientation: \_\_\_\_\_  
 Accumulator     Oil Pot     Horizontal     Vertical   
 Recirculator     Other (Describe)  \_\_\_\_\_  
 Intercooler  \_\_\_\_\_  
 Transfer Drum  \_\_\_\_\_

### Equipment Data and Limits:

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No    Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig / °F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol: \_\_\_\_\_ Cu. Ft.    Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_

Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

### Relief Valve Data:

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single    Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

**IIAR Standard 6**



## PRESSURE VESSELS

Plant Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Pressure Vessel

Vessel Location: \_\_\_\_\_  
 Vessel Identification Mark/No.: \_\_\_\_\_

### Application

High Pressure Receiver     Intercooler     Accumulator     Oil Pot  
 Pump Receiver, Low Temp     Pump Receiver, High Temp     Other (Describe) \_\_\_\_\_

### Application Data

Normal Operating Pressure (psig): \_\_\_\_\_ Temperature (°F): \_\_\_\_\_  
 Vessel Size (Diam. x LH, ft): \_\_\_\_\_ Normal Liquid Level (ft): \_\_\_\_\_  
 Normal Ammonia Inventory (cubic ft): \_\_\_\_\_  
 Design Capacity (Specify: Pumpdown, Surge Vol., TR, etc.): \_\_\_\_\_

### Vessel Nameplate Data

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured: \_\_\_\_\_ Max. Design Working Pressure (psig): \_\_\_\_\_  
 Maximum Allowable Pressure (psig): \_\_\_\_\_ At (°F): \_\_\_\_\_  
 Minimum Design Metal Temperature (°F): \_\_\_\_\_ At (psig): \_\_\_\_\_  
 Test Pressure Applied (psig): \_\_\_\_\_  
 National Board No.: \_\_\_\_\_ ASME Certification Stamp?  Yes  No

### Safety Relief Valve Data

Type:  Dual  Single  None  
 Manufacturer, Name, Model, Serial No.: \_\_\_\_\_  
 Year Manufactured or Recertified: \_\_\_\_\_ ASME Seal Unbroken?  Yes  No  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air/min): \_\_\_\_\_  
 Valve Connections:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_ Pipe Size:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_  
 Is Valve Properly Installed and Piped to Termination?  Yes  No

If No, Explain:

**IIAR Bulletin No. 109**

None  None  None  None  None  None  None  None

# Ammonia Refrigeration Safety Inspection Checklist

## PRESSURE VESSELS

Location: \_\_\_\_\_ ID/Tag No.: \_\_\_\_\_  
 Facility Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Application:

High Pressure Receiver  Oil Separator  Orientation: \_\_\_\_\_  
 Accumulator  Oil Pot  Horizontal   
 Recirculator  Other (Describe)  Vertical   
 Intercooler   
 Transfer Drum

### Equipment Data and Limits:

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig / °F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol: \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

### Relief Valve Data:

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

**IIAR Standard 6**

## PRESSURE VESSELS

Plant Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Pressure Vessel

Vessel Location: \_\_\_\_\_

Vessel Identification Mark/No.: \_\_\_\_\_

### Application

High Pressure Receiver     Intercooler     Accumulator     Oil Pot  
 Pump Receiver, Low Temp     Pump Receiver, High Temp     Other (Describe) \_\_\_\_\_

### Application Data

Normal Operating Pressure (psig): \_\_\_\_\_ Temperature (°F): \_\_\_\_\_

Vessel Size (Diam. x LH, ft): \_\_\_\_\_ Normal Liquid Level (ft): \_\_\_\_\_

Normal Ammonia Inventory (cubic ft): \_\_\_\_\_

Design Capacity (Specify: Pumpdown, Surge Vol., TR, etc.): \_\_\_\_\_

### Vessel Nameplate Data

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_

Year Manufactured: \_\_\_\_\_ Max. Design Working Pressure (psig): \_\_\_\_\_

Maximum Allowable Pressure (psig): \_\_\_\_\_ At (°F): \_\_\_\_\_

Minimum Design Metal Temperature (°F): \_\_\_\_\_ At (psig): \_\_\_\_\_

Test Pressure Applied (psig): \_\_\_\_\_

National Board No.: \_\_\_\_\_ ASME Certification Stamp?  Yes  No

### Safety Relief Valve Data

Type:  Dual  Single  None

Manufacturer, Name, Model, Serial No.: \_\_\_\_\_

Year Manufactured or Recertified: \_\_\_\_\_ ASME Seal Unbroken?  Yes  No

Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air/min): \_\_\_\_\_

Valve Connections:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_ Pipe Size:  Inlet \_\_\_\_\_  Outlet \_\_\_\_\_

Is Valve Properly Installed and Piped to Termination?  Yes  No

If No, Explain: \_\_\_\_\_

### Visual Liquid Level Indicator

Tubular     Flat Armored     Armored Bullseye     High Pressure Industrial     None

# Ammonia Refrigeration Safety Inspection Checklist

## PRESSURE VESSELS

Location: \_\_\_\_\_ ID/Tag No.: \_\_\_\_\_  
 Facility Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

### Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

### Equipment Data and Limits:

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_

ASME Cert. Stamp?  Yes,  No    Year Mfg: \_\_\_\_\_ National Board #: \_\_\_\_\_

MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_

Operating (psig / °F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_

Total Internal Vol: \_\_\_\_\_ Cu. Ft.    Normal Ammonia Inventory (lbs.): \_\_\_\_\_

Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_

Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

### Relief Valve Data:

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_

Assembly:  Dual w/change over valve,  Single    Type of Relief Valve:  Internal,  External

Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_



**PRESSURE VESSELS**

Requirement/Recommendation	Conforms	Recommended Action/Comments	Safety Status	Target Date
a) Nameplate legible and complete?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
b) Operating within limitations:				
1) Maximum pressure?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2) Minimum temperature?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
c) Vessel ASME stamp legible?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
d) Certification drawings on file?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
e) Manufacturer data report on file?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
f) Does vessel have known alterations/modifications?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
1) If yes, was vessel recertified?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2) Is revised data report on file?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
g) Relief valve:				
1) Proper type?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2) Correct setting?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
3) Capacity correct?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
4) Installation correct?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
5) Piping to termination correct?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
6) Relief valve replaced or recertified within last 5 years of service?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
7) ASME seal unbroken?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
h) Tubular linear liquid level indicator (sight glass):				
1) Protected from traffic hazards?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
2) 360° guards?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
3) Internal check shutoff valves?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
i) Vessel properly identified? (Name, pressure level per IIAR Bulletin 114)	<input type="checkbox"/> Yes <input type="checkbox"/> No			
j) Vessel condition (check one):	<input type="checkbox"/> no visible corrosion <input type="checkbox"/> slight visible corrosion <input type="checkbox"/> extensive corrosion <input type="checkbox"/> unknown (insulated)			
k) Insulation condition (check one):	<input type="checkbox"/> no vapor retarder leaks <input type="checkbox"/> slight vapor retarder leaks <input type="checkbox"/> extensive vapor retarder leaks <input type="checkbox"/> not insulated			
l) Relief valve condition (check one):	<input type="checkbox"/> clean, no visible corrosion <input type="checkbox"/> slight external corrosion <input type="checkbox"/> extensive corrosion			

Are there any other conditions that might negatively affect safe vessel operation?  Yes  No  
 If yes, describe: \_\_\_\_\_

**IIAR Bulletin No. 109**

**Ammonia Refrigeration Safety Inspection Checklist**

**PRESSURE VESSELS**

Location:		ID/Tag No.:		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/IIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/IIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			

If No, describe: \_\_\_\_\_



<b>Ammonia Refrigeration Safety Inspection Checklist</b>	
<b>PRESSURE VESSELS</b>	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

<b>Application:</b>		
High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: _____	Model #: _____	Serial #: _____	
ASME Cert. Stamp? <input type="checkbox"/> Yes, <input type="checkbox"/> No	Year Mfg.: _____	National Board #: _____	
MAWP (psig): _____	@ °F _____	MDMT (°F): _____	@ psig _____
Operating (psig /°F): _____ / _____	Normal Liquid Level: _____		
Total Internal Vol. _____ Cu. Ft.	Normal Ammonia Inventory (lbs.): _____		
Material: <input type="checkbox"/> Carbon Steel, <input type="checkbox"/> Stainless Steel, <input type="checkbox"/> Aluminum, <input type="checkbox"/> Other: _____			
Level Indicator Type: <input type="checkbox"/> None, <input type="checkbox"/> Armored Bullseye, <input type="checkbox"/> Level Column w/Bullseye, <input type="checkbox"/> Flat Armored, <input type="checkbox"/> Level Column Only, <input type="checkbox"/> Level Column w/ Veri/Techni Level			

**Relief Valve Data:**

Manufacturer: _____	Model: _____	Year Installed: _____	
Assembly: <input type="checkbox"/> Dual w/change over valve, <input type="checkbox"/> Single	Type of Relief Valve: <input type="checkbox"/> Internal, <input type="checkbox"/> External		
Pressure Setting (psig): _____	Capacity (lbs. air per min/SCFM): _____ / _____		

<b>Ammonia Refrigeration Safety Inspection Checklist</b>				
<b>PRESSURE VESSELS</b>				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				





MAIN VALVE

HPL AMMONIA

HI PRESS RECEIVER  
**CAUTION  
AMMONIA**  
AMMONIA

Purell

Various containers on a table, including a blue bucket, a white bucket, and several cans.

Grey compressor unit on a tank with yellow hoses.

Black bench vice and other tools on a workbench.

## Ammonia Refrigeration Safety Inspection Checklist

### PRESSURE VESSELS

Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

Application: \_\_\_\_\_ Orientation: \_\_\_\_\_

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

#### Equipment Data and Limits:

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_

ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_

MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_

Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_

Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_

Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_

Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

#### Relief Valve Data:

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_

Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External

Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

## Ammonia Refrigeration Safety Inspection Checklist

### PRESSURE VESSELS

Location: _____	ID/Tag No.: _____			
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____				



## Ammonia Refrigeration Safety Inspection Checklist

### PRESSURE VESSELS

Location: \_\_\_\_\_ ID/Tag No.: \_\_\_\_\_  
Facility Owner: \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact: \_\_\_\_\_ Phone: \_\_\_\_\_  
Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

## Ammonia Refrigeration Safety Inspection Checklist

### PRESSURE VESSELS

Location: UNITED REFRIGERATION ID/Tag No.: HPR-1  
Facility Owner: UNITED REFRIGERATION INC.  
Address: 256 E. BUTTONWILLOW, REEDLEY, CA 93631  
Contact: JAMES DAVIS Phone: 559.805.1238  
Inspector: PETER THOMAS, P.E. Date: 8/24/22

Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

<b>Application:</b>		<b>Orientation:</b>	
High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>	
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>	
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>		
Intercooler..... <input type="checkbox"/>			
Transfer Drum..... <input type="checkbox"/>			

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

**Application:**

- High Pressure Receiver.....
- Accumulator.....
- Recirculator.....
- Intercooler.....
- Transfer Drum.....

- Oil Separator .....
- Oil Pot .....
- Other (Describe).....
- \_\_\_\_\_

**Orientation:**

- Horizontal .....
- Vertical .....

**Application:**

- High Pressure Receiver.....
- Accumulator.....
- Recirculator.....
- Intercooler.....
- Transfer Drum.....

- Oil Separator .....
- Oil Pot .....
- Other (Describe).....
- \_\_\_\_\_

**Orientation:**

- Horizontal .....
- Vertical .....



Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: _____	Model #: _____	Serial #: _____
ASME Cert. Stamp? <input type="checkbox"/> Yes, <input type="checkbox"/> No	Year Mfg.: _____	National Board #: _____
MAWP (psig): _____	@ °F _____	MDMT (°F): _____ @ psig _____
Operating (psig /°F): _____ / _____	Normal Liquid Level: _____	
Total Internal Vol. _____ Cu. Ft.	Normal Ammonia Inventory (lbs.): _____	
Material: <input type="checkbox"/> Carbon Steel, <input type="checkbox"/> Stainless Steel, <input type="checkbox"/> Aluminum, <input type="checkbox"/> Other: _____		
Level Indicator Type: <input type="checkbox"/> None, <input type="checkbox"/> Armored Bullseye, <input type="checkbox"/> Level Column w/Bullseye, <input type="checkbox"/> Flat Armored, <input type="checkbox"/> Level Column Only, <input type="checkbox"/> Level Column w/ Veri/Techni Level		

**Relief Valve Data:**

Manufacturer: _____	Model: _____	Year Installed: _____
Assembly: <input type="checkbox"/> Dual w/change over valve, <input type="checkbox"/> Single	Type of Relief Valve: <input type="checkbox"/> Internal, <input type="checkbox"/> External	
Pressure Setting (psig): _____	Capacity (lbs. air per min/SCFM): _____ / _____	

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level: _____ <input type="checkbox"/> Not insulated	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
s) Free of pitting and surface damage? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				



**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol: \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Equipment Data and Limits:**

Manufacturer: GLOBE ICE MACHINE CO Model #: N/A Serial #: 22731  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: 1986 National Board #: NONE  
 MAWP (psig): 250 @ °F 200 MDMT (°F): -20 @ psig 250  
 Operating (psig /°F): 165.9<sup>psig</sup> / 90°F Normal Liquid Level: 12"  
 Total Internal Vol: 391.9 Cu. Ft. Normal Ammonia Inventory (lbs.): 2330.4  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level



**Equipment Data and Limits:**

Manufacturer: GLOBE ICE MACHINE CO Model #: N/A Serial #: 22731  
ASME Cert. Stamp?  Yes,  No Year Mfg.: 1986 National Board #: NONE  
MAWP (psig): 250 @ °F 200 MDMT (°F): -20 @ psig 250  
Operating (psig / °F): 165.9<sup>psig</sup> / 90°F Normal Liquid Level: 12"  
Total Internal Vol: 391.9 Cu. Ft. Normal Ammonia Inventory (lbs.): 2330.4  
Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other:  
Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level



NATIONAL BOARD

NB 522

CERTIFIED BY

**TIGER  
TANKS**

BAKERSFIELD, CALIFORNIA

ASME  
U  
W  
RT 4

M.A.W.P. 300 PSIG AT 250 DEG. F.

M.A.E.W.P. - PSIG AT - DEG. F.

M.D.M.T. -20 DEG. F. AT 300 P.S.I.G

MFG. S/N 2102-11592 C.A. NONE

HEAD THK. .315 MIN. MAT'L SA516 70N

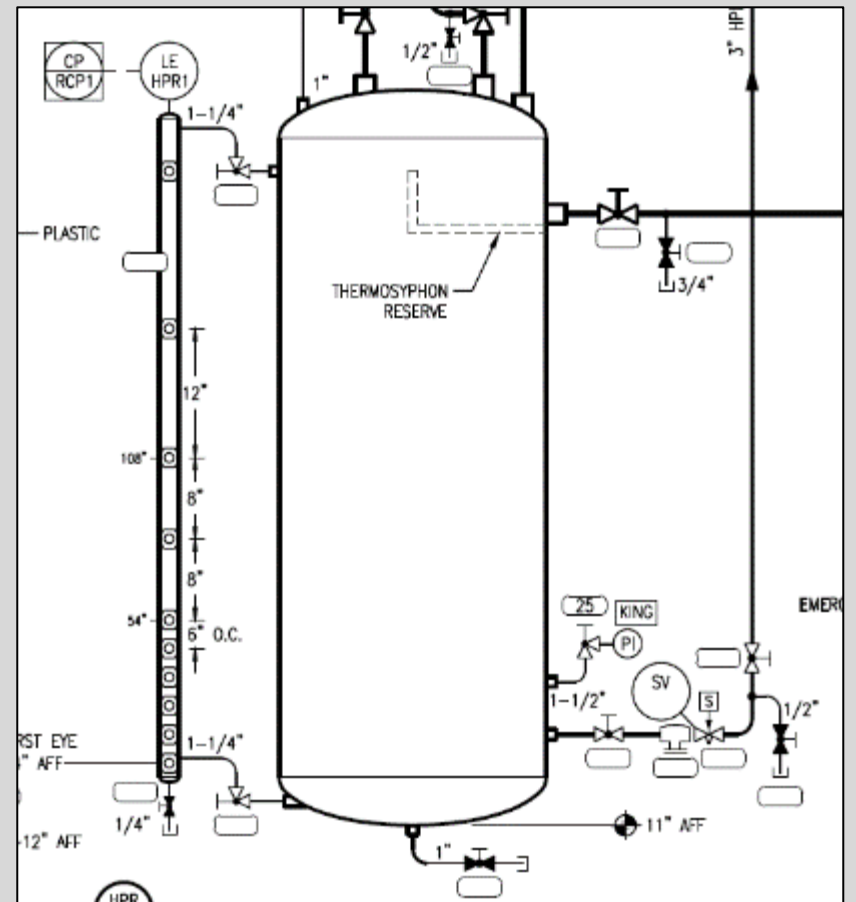
SHELL THK. .375 MAT'L SA516 70N

YR BUILT 2022 Dia. x S/S 42 OD X 156

NH3 SERVICE

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol: \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level



**HPR 1 HIGH PRESSURE RECEIVER/THERMOSIPHON VESSEL**

MORFAB MODEL: 72"Ø X 18'-0" OAL

SN: 10615

(2002)

HIGH PRESSURE RECEIVER		HPR1
DESIGN OPERATING PRESSURE		181 PSIG
DESIGN OPERATING TEMPERATURE		95°F
INTERNAL VOLUME		CU.FT.
OPERATING NH <sub>3</sub> CAPACITY @		LBS.
NATIONAL BOARD NUMBER		9615

MATERIALS: CARBON STEEL

NOTE: 300 PSIG MAWP @ 300° TO -20°F



Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

**Application:**

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_

ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_

MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_

Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_

Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_

Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_

Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_

Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External

Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ /

**Relief Valve Data:**

Manufacturer: HANSEN Model: H5602 Year Installed: SEPT 2019  
Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
Pressure Setting (psig): 250 Capacity (lbs. air per min/SCFM): 57.6 #/min



Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

**Application:**

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

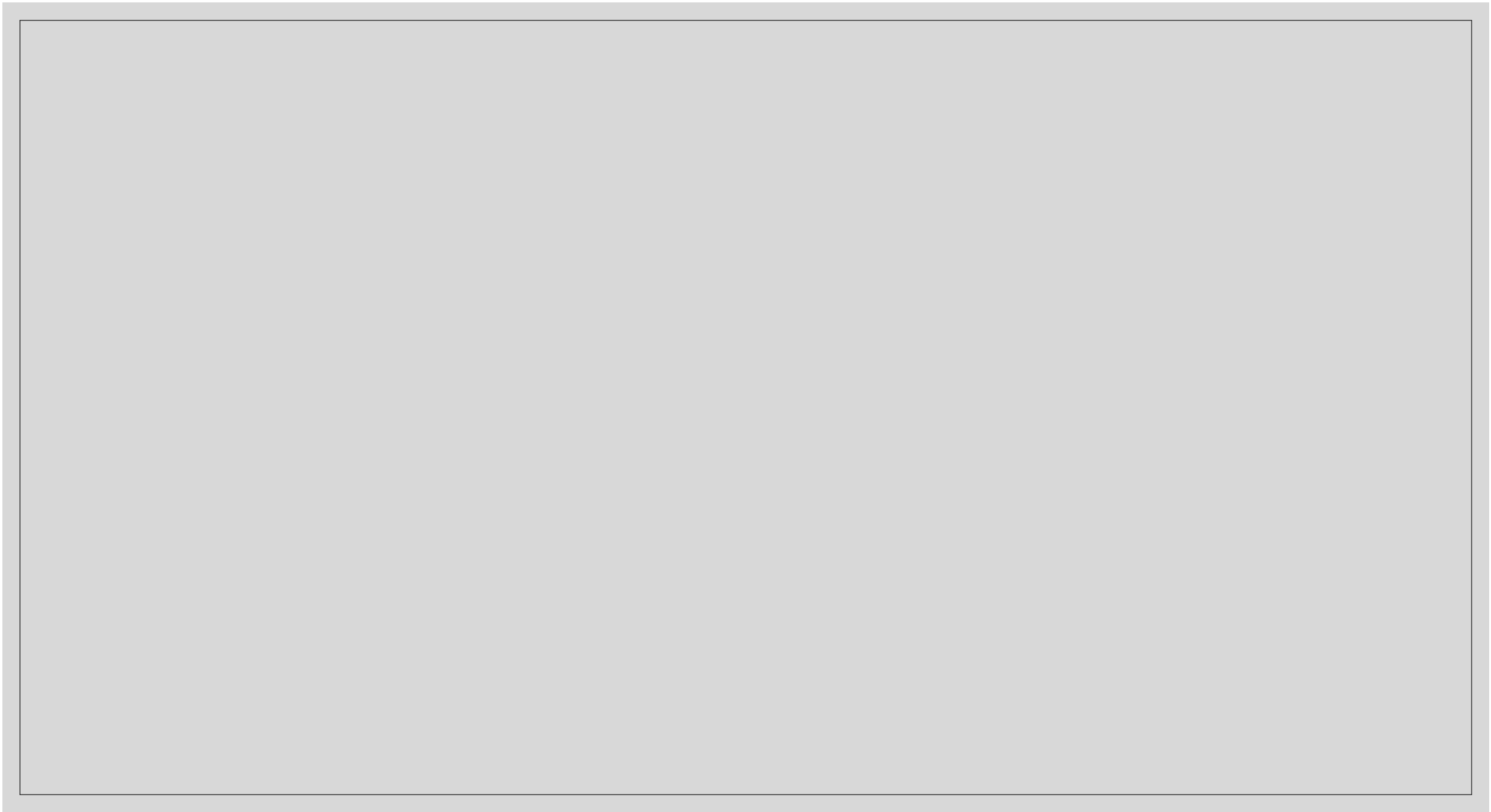
Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

Inspection Items	Conforms
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/IIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

Inspection Items	Conforms
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/IIAR 2?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>









NATIONAL BOARD NO. 11390



CERTIFIED BY  
REFRIGERATION VALVES  
and SYSTEMS CORPORATION  
BRYAN, TEXAS

W

R133

MAWP 250 PSI AT 300 °F

2

MDMT -20 °F AT 250 PSI

SERIAL NO.  
98666

YEAR BUILT  
1998



HEAD THK.: 3/8 in.

SHELL THK.: 3/8 in.

U.S. GALLONS: 575

SQ. FT. SURFACE: 117

SERIAL No.: 98666

Nameplate





<b>Ammonia Refrigeration Safety Inspection Checklist</b>	
<b>PRESSURE VESSELS</b>	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

**Application:**

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ "F \_\_\_\_\_ MDMT ("F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /"F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

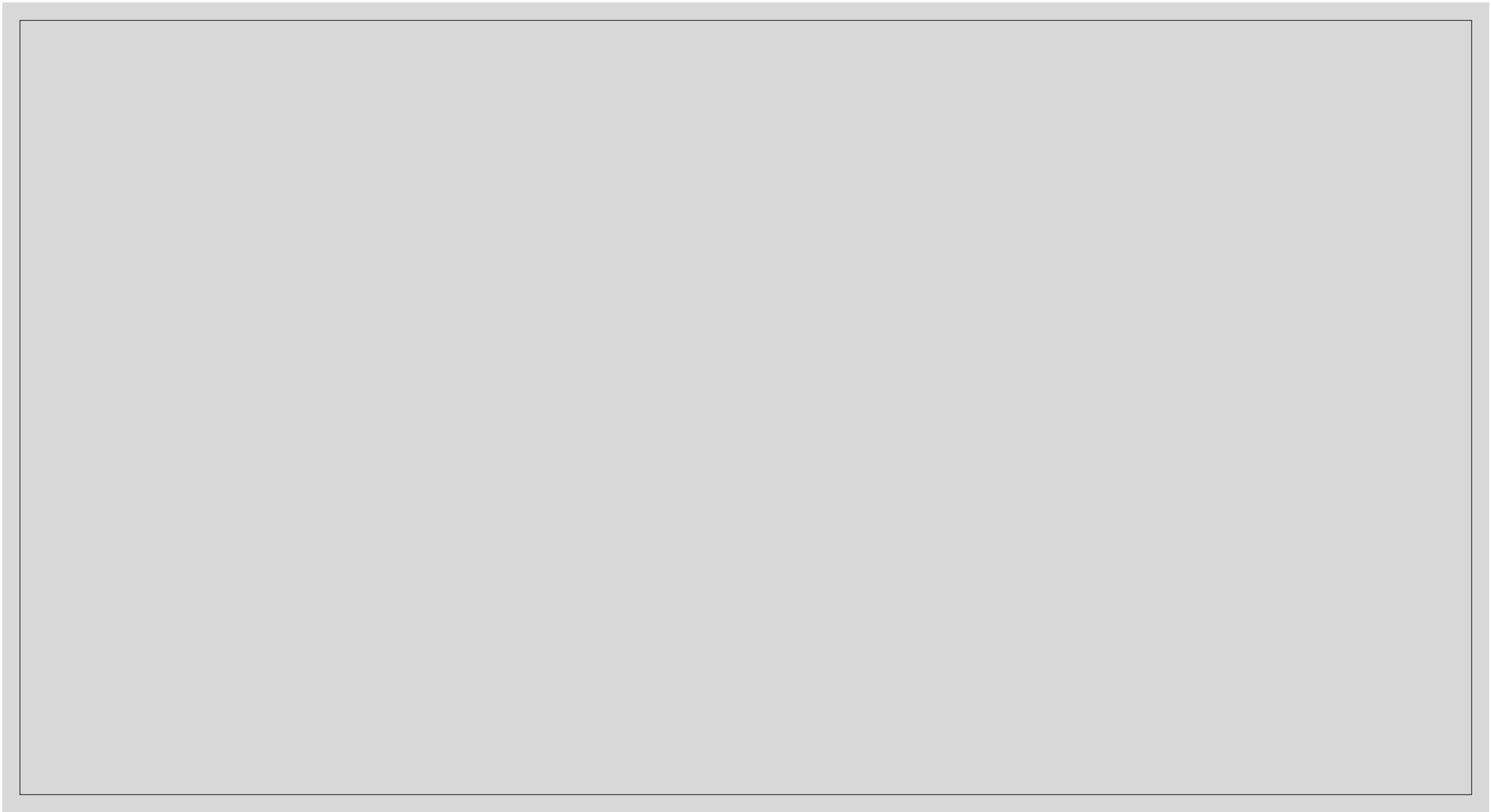
**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/charge over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

<b>Ammonia Refrigeration Safety Inspection Checklist</b>				
<b>PRESSURE VESSELS</b>				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIA 2.2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIA 2.2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				



<b>Inspection Items</b>	<b>Conforms</b>
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>



Inspection Items	Conforms
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

b) Suitable for ammonia?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>		14" + 150 psi	







Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIA 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIA 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				



<b>Inspection Items</b>	<b>Conforms</b>
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
d) Fasteners tight, adequately anchored, and supported?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>



<b>Ammonia Refrigeration Safety Inspection Checklist</b>	
<b>PRESSURE VESSELS</b>	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

**Application:**

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_

ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_

MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_

Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_

Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_

Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_

Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_

Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External

Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

<b>Ammonia Refrigeration Safety Inspection Checklist</b>				
<b>PRESSURE VESSELS</b>				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIA 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIA 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

Inspection Items	Conforms
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>		CANNOT REACH KING VALVE FROM THE GROUND	
--	--	--	---	--

Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_

ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_

MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_

Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_

Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_

Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_

Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_

Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External

Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				



Inspection Items	Conforms
------------------	----------

f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
-----------------------------------	---

f) Free of excessive ice buildup?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
-----------------------------------	--

HIGH-SIDE OF SYSTEM	
---------------------	--



<b>Inspection Items</b>	<b>Conforms</b>
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

















USE NO HOOK  
KEEP DRY







<b>Ammonia Refrigeration Safety Inspection Checklist</b>	
<b>PRESSURE VESSELS</b>	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

<b>Application:</b>		
High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: _____	Model #: _____	Serial #: _____	
ASME Cert. Stamp? <input type="checkbox"/> Yes, <input type="checkbox"/> No	Year Mfg.: _____	National Board #: _____	
MAWP (psig): _____	@ °F _____	MDMT (°F): _____	@ psig _____
Operating (psig /°F): _____ / _____	Normal Liquid Level: _____		
Total Internal Vol. _____ Cu. Ft.	Normal Ammonia Inventory (lbs.): _____		
Material: <input type="checkbox"/> Carbon Steel, <input type="checkbox"/> Stainless Steel, <input type="checkbox"/> Aluminum, <input type="checkbox"/> Other: _____			
Level Indicator Type: <input type="checkbox"/> None, <input type="checkbox"/> Armored Bullseye, <input type="checkbox"/> Level Column w/Bullseye, <input type="checkbox"/> Flat Armored, <input type="checkbox"/> Level Column Only, <input type="checkbox"/> Level Column w/ Veri/Techni Level			

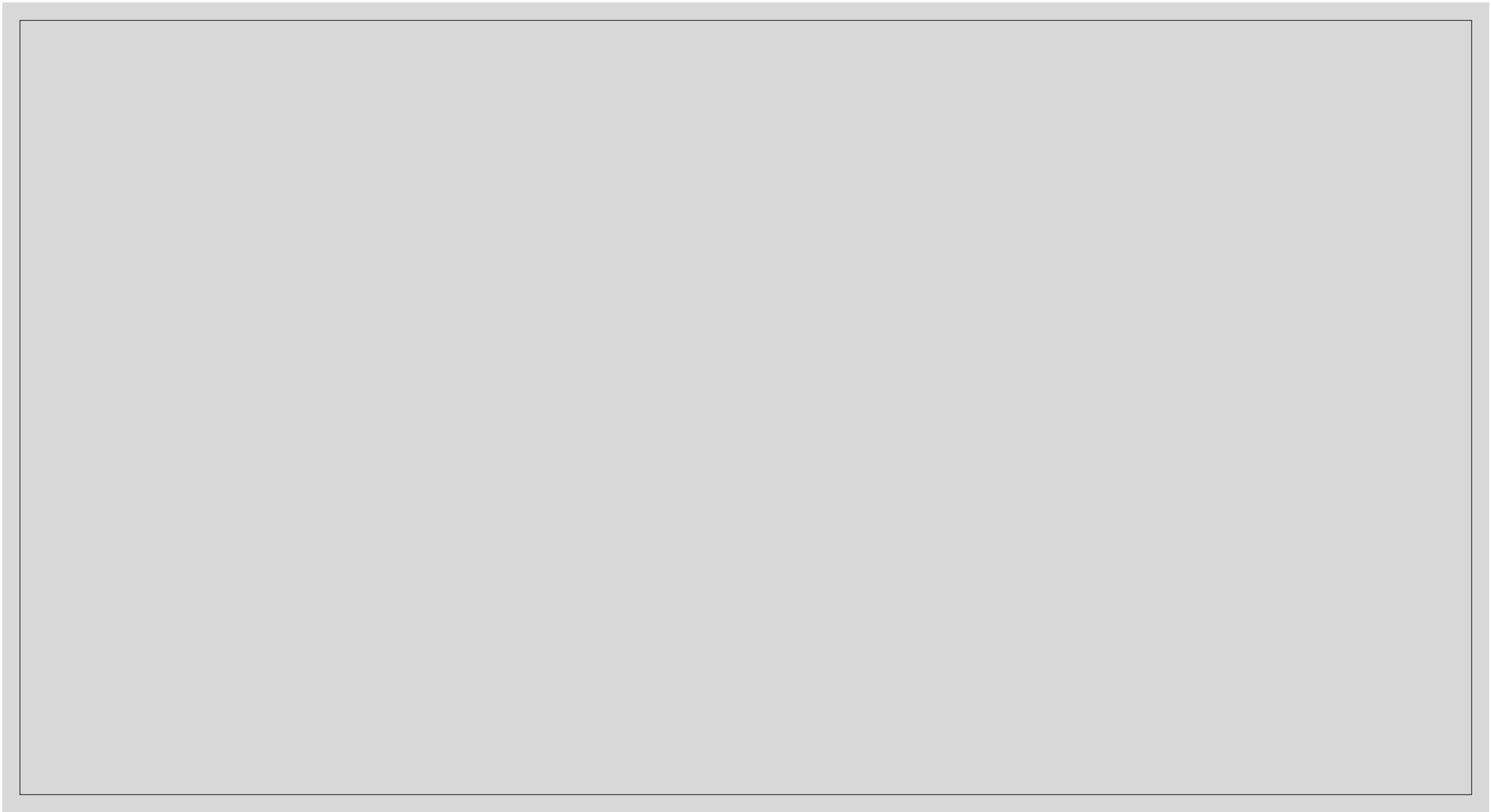
**Relief Valve Data:**

Manufacturer: _____	Model: _____	Year Installed: _____	
Assembly: <input type="checkbox"/> Dual w/change over valve, <input type="checkbox"/> Single	Type of Relief Valve: <input type="checkbox"/> Internal, <input type="checkbox"/> External		
Pressure Setting (psig): _____	Capacity (lbs. air per min/SCFM): _____ / _____		

<b>Ammonia Refrigeration Safety Inspection Checklist</b>				
<b>PRESSURE VESSELS</b>				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIA 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIA 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level: _____ <input type="checkbox"/> Not insulated	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
s) Free of pitting and surface damage? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				



<b>Inspection Items</b>	<b>Conforms</b>
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
g) Free of abnormal sounds/vibration?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
h) Free of ammonia leaks?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>



Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

**Application:**

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_

ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_

MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_

Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_

Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_

Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_

Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

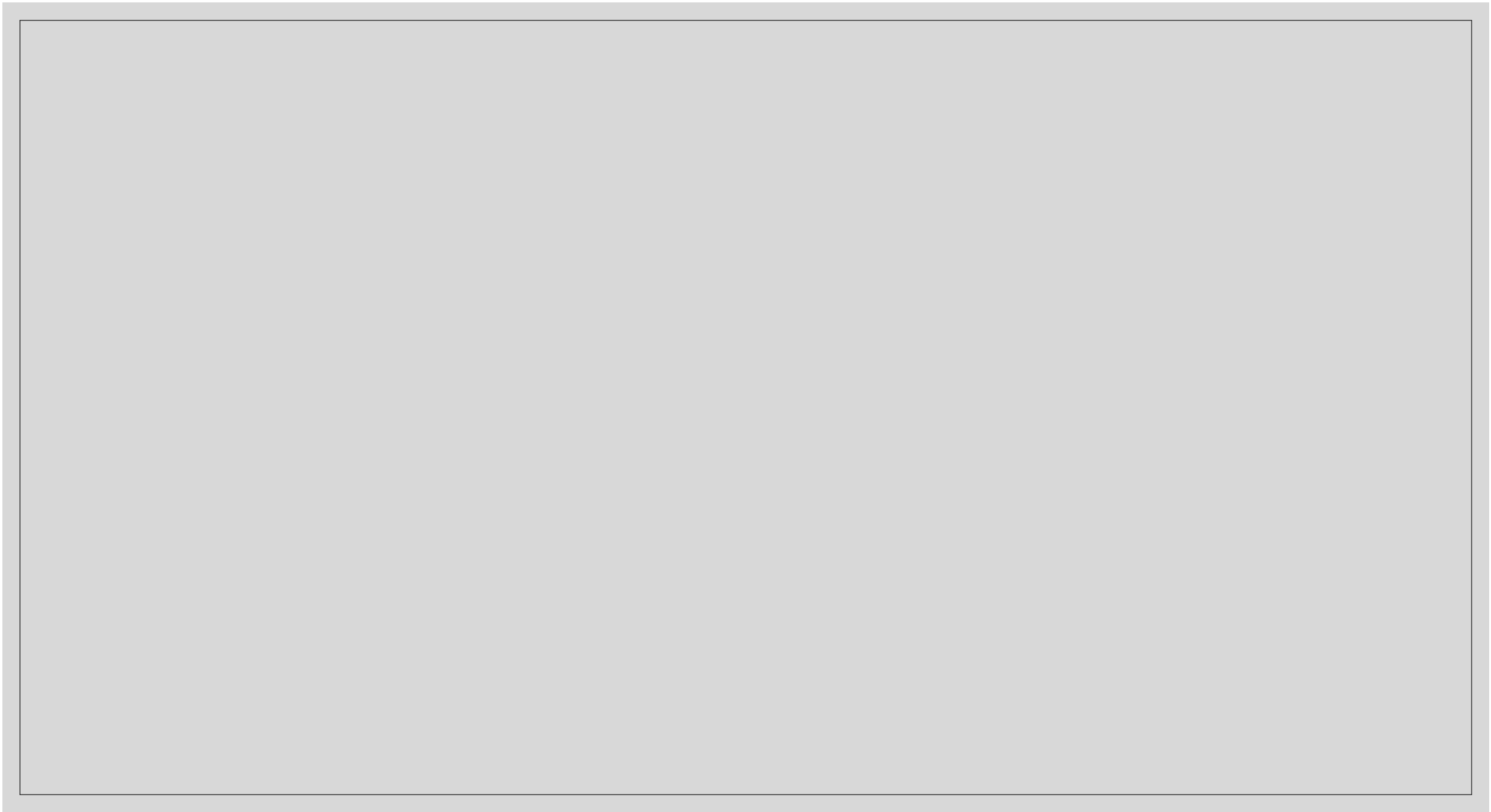
Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_

Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External

Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIA 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIA 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

<b>Inspection Items</b>	<b>Conforms</b>
i) All piping has markers per ANSI/IIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
i) All piping has markers per ANSI/IIAR 2?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>





<b>Ammonia Refrigeration Safety Inspection Checklist</b>	
<b>PRESSURE VESSELS</b>	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

<b>Application:</b>		
High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: _____	Model #: _____	Serial #: _____	
ASME Cert. Stamp? <input type="checkbox"/> Yes, <input type="checkbox"/> No	Year Mfg.: _____	National Board #: _____	
MAWP (psig): _____	@ °F _____	MDMT (°F): _____	@ psig _____
Operating (psig /°F): _____ / _____	Normal Liquid Level: _____		
Total Internal Vol. _____ Cu. Ft.	Normal Ammonia Inventory (lbs.): _____		
Material: <input type="checkbox"/> Carbon Steel, <input type="checkbox"/> Stainless Steel, <input type="checkbox"/> Aluminum, <input type="checkbox"/> Other: _____			
Level Indicator Type: <input type="checkbox"/> None, <input type="checkbox"/> Armored Bullseye, <input type="checkbox"/> Level Column w/Bullseye, <input type="checkbox"/> Flat Armored, <input type="checkbox"/> Level Column Only, <input type="checkbox"/> Level Column w/ Veri/Techni Level			

**Relief Valve Data:**

Manufacturer: _____	Model: _____	Year Installed: _____	
Assembly: <input type="checkbox"/> Dual w/change over valve, <input type="checkbox"/> Single	Type of Relief Valve: <input type="checkbox"/> Internal, <input type="checkbox"/> External		
Pressure Setting (psig): _____	Capacity (lbs. air per min/SCFM): _____ / _____		

<b>Ammonia Refrigeration Safety Inspection Checklist</b>				
<b>PRESSURE VESSELS</b>				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level: _____ <input type="checkbox"/> Not insulated	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
s) Free of pitting and surface damage? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

Inspection Items	Conforms
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

j) Are valves in good condition?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>		KING VALVE HAS COBWEBS. AROUND HANDWHEEL	

Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

<b>Inspection Items</b>	<b>Conforms</b>
1) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
1) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

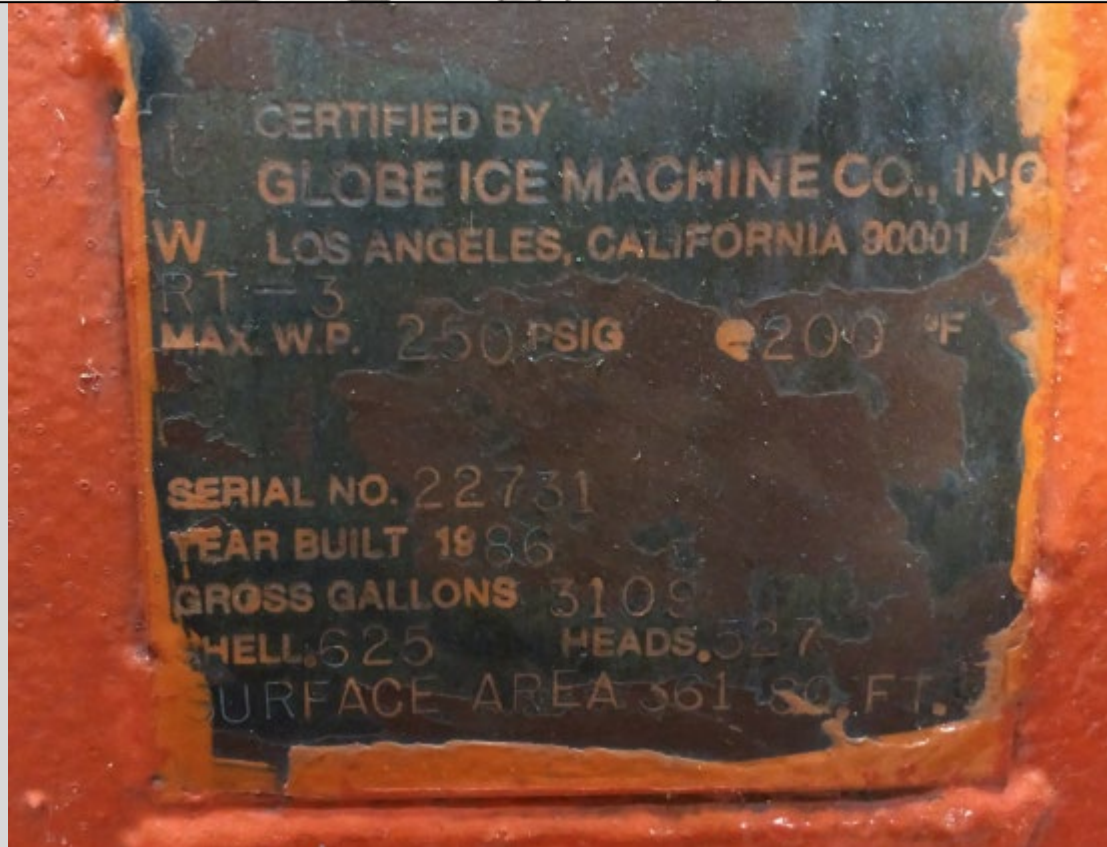
Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				



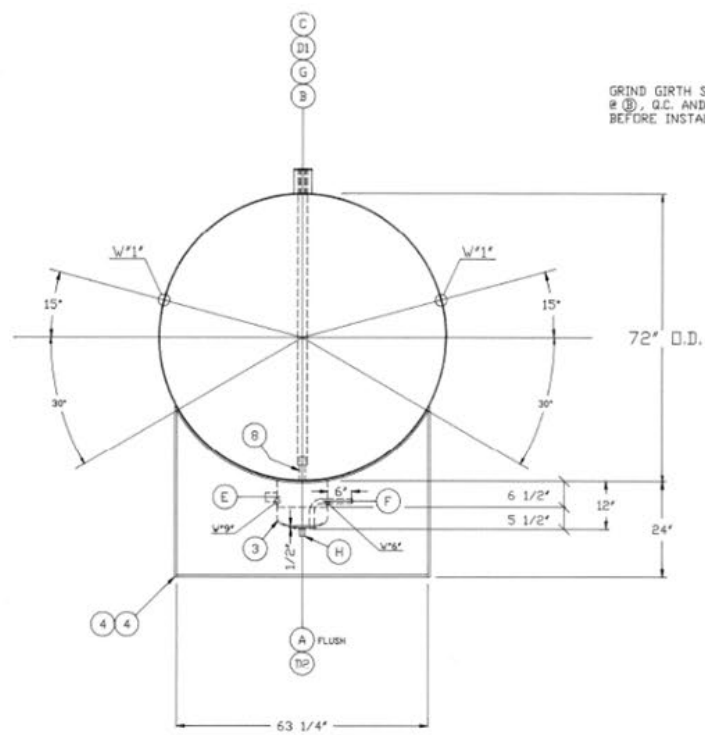
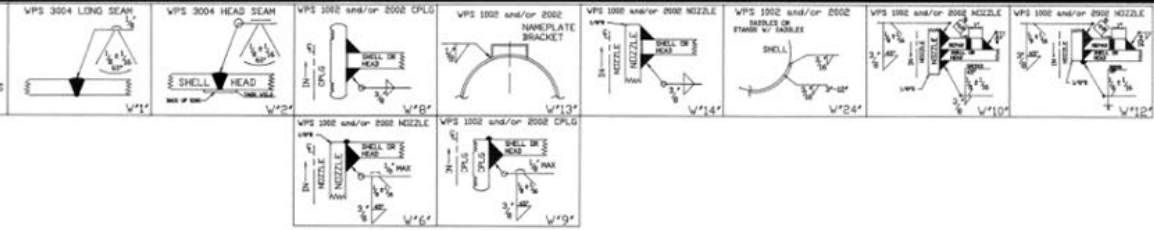
Inspection Items	Conforms
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

m) Certification drawings on file?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>		NO NB, DATA REPORT, OR DRAWING
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>		" " " "

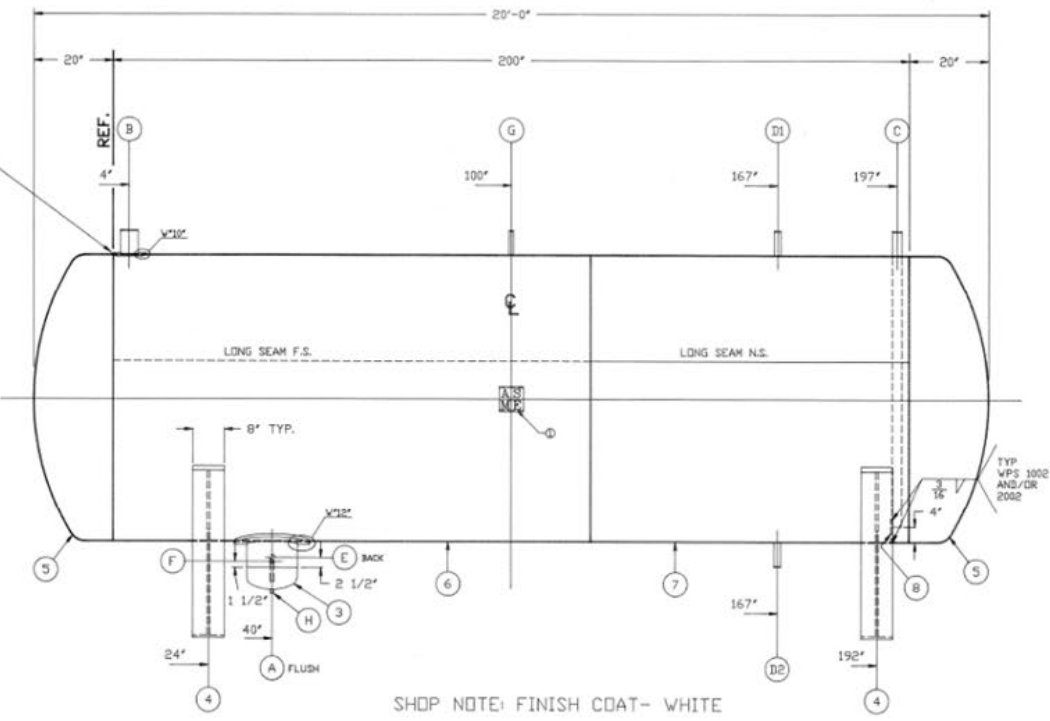




- GENERAL NOTES
- 1) ALL PIPE NOZZLES EXTEND 6" OUTSIDE SHELL UNLESS INDICATED OTHERWISE
  - 2) V 4° IS TYPICAL FOR ALL HEAD SEAM WELDS
  - 3) V 3° IS TYPICAL FOR ALL PIPE TO PIPE AND PIPE TO BUTT WELD FITTING WELDS
  - 4) V 14° IS TYPICAL FOR ALL PIPE NOZZLES UNLESS INDICATED OTHERWISE
  - 5) V 40° IS TYPICAL FOR ALL CPLG'S UNLESS INDICATED OTHERWISE
  - 6) SA516-70 MAY BE SUBSTITUTED FOR SA36
  - 7) ROUND AND LONG SEAM ALIGNMENT TOLERANCE IS 1/4" UP TO 1/2" THK SHELLS AND 1/8" UP TO 2" THK SHELLS
  - 8) ALL PIPE SPECIFIED AS SA528 IS SEAMLESS UNLESS NOTED AS ERW
  - 9) SA106 PIPE MAY BE SUBSTITUTED FOR SA538 SEAMLESS AND VICE VERSA



GRIND GIRTH SEAM FLUSH @ B, D, C AND A/I INSPECT BEFORE INSTALLING REPAD.



SHOP NOTE: FINISH COAT- WHITE

TEST WITH WATER

ASME DATA PLATE

ASME DATA PLATE information including manufacturer details (Precision Valve and Systems Corporation), material specifications, and design parameters.

BILL OF MATERIALS

NOZZLE SCHEDULE										SHELL HEADS, INTERNALS, SUPPORTS									
ITEM	QTY	SIZE	TYPE	RATING	MATERIAL	SERVICE	LETH	REINFORCEMENT	ITEM	QTY	DESCRIPTION	MATERIAL							
Q									10										
R									15										
S									14										
N									13										
M									12										
L									11										
K									10										
J									9										
H	1	3/4"	CPLG	3000#	SA508	RELIEF			8	1	PLATE 5/16" THK x 1 1/2" WIDE x 6" DEEP	SA36							
G	1	3/4"	PIPE	5/80	SA308B	RELIEF	7'	TDR	7	1	78" O.D. x 3/4" THK ROLLER SHELL x 80" LRG	SA516-70							
F	1	3/4"	PIPE	5/80	SA308B	RELIEF	12 1/2'	TDR	6	1	78" O.D. x 3/4" THK ROLLER SHELL x 120" LRG	SA516-70							
E	1	1 1/4"	CPLG	3028#	SA308	LEVEL CUT			5	2	78" O.D. x 3/4" THK 25 ELLIP HEADS	SA516-70							
D	2	1 1/4"	PIPE	5/80	SA308B	LEVEL COLUMN	7'		4	1	SET 378 78" O.D. STANDS 84 x 24" HIGH	SA36							
C	1	8"	PIPE	5/40	SA308B	OUTLET	74		3	1	12 3/4" O.D. x 5/16" THK 25 ELLIP HEAD	SA516-70							
B	1	4"	PIPE	5/40	SA308B	INLET	7'		2	2	78 1/8" THK x 1 1/2" VDR BACKING STRIP	SA36							
A	1	28 3/4"	PIPE	5/STD	SA308B	SUMP	8 1/2'		1	1	378 ASME DATA BRKT x 2" DEEP	SA36							

CUSTOMER: IRAPP  
P.O. NO.: 1881

VESEL DESIGN SPECIFICATIONS  
DESIGN & CONSTRUCTION IN ACCORDANCE WITH SECTION VIII DIV. 1 ASME CODE FOR PRESSURE VESSELS EDITION & ADDENDA TO 1985  
TITLE: 72" D.D. x 20'-0" HORIZ 300# ASME H.P. RECEIVER

REVISIONS: 1. REVISED STAGES

CHECKED BY: [Signature] DATE: 7-30-1991



Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/charge over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
<b>o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?</b>	<b>Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></b>			
<b>p) If No, has it been recertified and documentation filed?</b>	<b>Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></b>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

Inspection Items	Conforms
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>		UNKNOWN. NEED DATA REPORT	
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			







<b>Ammonia Refrigeration Safety Inspection Checklist</b>	
<b>PRESSURE VESSELS</b>	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

**Application:**

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercoler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_

ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_

MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_

Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_

Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_

Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_

Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_

Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External

Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

<b>Ammonia Refrigeration Safety Inspection Checklist</b>				
<b>PRESSURE VESSELS</b>				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

<b>Inspection Items</b>	<b>Conforms</b>
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>











WORKING  
VALVE

ANHYDROUS AMMONIA

Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____				



Inspection Items	Conforms
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input checked="" type="checkbox"/> Not insulated













<b>Ammonia Refrigeration Safety Inspection Checklist</b>	
<b>PRESSURE VESSELS</b>	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

**Application:**

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

<b>Ammonia Refrigeration Safety Inspection Checklist</b>				
<b>PRESSURE VESSELS</b>				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____				

Inspection Items	Conforms
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>

s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Extensive <input type="checkbox"/>		SEVERAL SCRATCHES HAVE REMOVED PAINT	
--	---	--	---	--





# ANSI/IIAR 6- 2019 TABLE A.11.1.1.3.1

Table A.11.1.1.3.1  
Piping Sizes, Schedules, and Thicknesses (Carbon Steel Only)

Pipe Size (in.) (OD)	Pipe Schedule	Nominal Thickness (in.)	*Mill Tolerance Thickness (in.)	Alert Thickness (in.)	Remaining Percentage from Nominal	Replacement Thickness (in.)	Remaining Percentage from Nominal	**Pressure T <sub>min</sub> (in.)
0.5 (0.840)	80	0.147	0.129	0.080	54%	0.044	30%	0.011
0.75 (1.050)	80	0.154	0.135	0.080	52%	0.046	30%	0.013
1 (1.315)	80	0.179	0.157	0.080	45%	0.054	30%	0.017
1.25 (1.660)	80	0.191	0.167	0.080	42%	0.057	30%	0.021
1.5 (1.900)	80	0.200	0.175	0.090	45%	0.060	30%	0.024
2 (2.375)	80	0.218	0.191	0.100	46%	0.065	30%	0.030
2 (2.375)	40	0.154	0.135	0.100	65%	0.046	30%	0.030
2.5 (2.875)	40	0.203	0.178	0.100	49%	0.061	30%	0.036
3 (3.500)	40	0.216	0.189	0.110	51%	0.065	30%	0.044
3.5 (4.000)	40	0.226	0.198	0.120	53%	0.068	30%	0.051
4 (4.500)	40	0.237	0.207	0.120	51%	0.071	30%	0.057
5 (5.563)	40	0.258	0.226	0.120	47%	0.081	31%	0.071
6 (6.625)	40	0.280	0.245	0.130	46%	0.094	34%	0.084
8 (8.625)	40	0.322	0.282	0.131	41%	0.119	37%	0.109
10 (10.750)	40	0.365	0.319	0.164	45%	0.146	40%	0.136
12 (12.750)	ST	0.375	0.328	0.194	52%	0.172	46%	0.162
14 (14.000)	ST	0.375	0.328	0.213	57%	0.188	50%	0.178
16 (16.000)	ST	0.375	0.328	0.244	65%	0.213	57%	0.203
18 (18.000)	ST	0.375	0.328	0.274	73%	0.238	64%	0.228
20 (20.000)	ST	0.375	0.328	0.305	81%	0.264	70%	0.254
24 (24.000)	ST	0.375	0.328	0.326	87%	0.315	84%	0.305

Adapted from *Principles and Practices of Mechanical Integrity Guidebook for Industrial Refrigeration Systems*.  
 \*Mill Tolerance Thickness is 12.5% less than Nominal Thickness in accordance with ASME B31.5 and ASTM specifications.  
 \*\*Pressure T<sub>min</sub> is in accordance with ASME B31.5 (300 psi, A53 Gr A ERW, temperatures at or above -20 °F).









Trademark

DUPLICATE TAG

American Bridge Company, Inc.

Division of

United States Steel Corporation



RT 4

W

MAX. ALLOW. WORKING PRESS.

250

PER INCH

650

SERIAL NO. 134158

BUILT IN 79

SHELL THICKNESS

1/2"

HEAD THICKNESS

.547" MIN.

SURFACE AREA 237

SQ. FT. 1961

SERVICE: DUPLICATE TAG

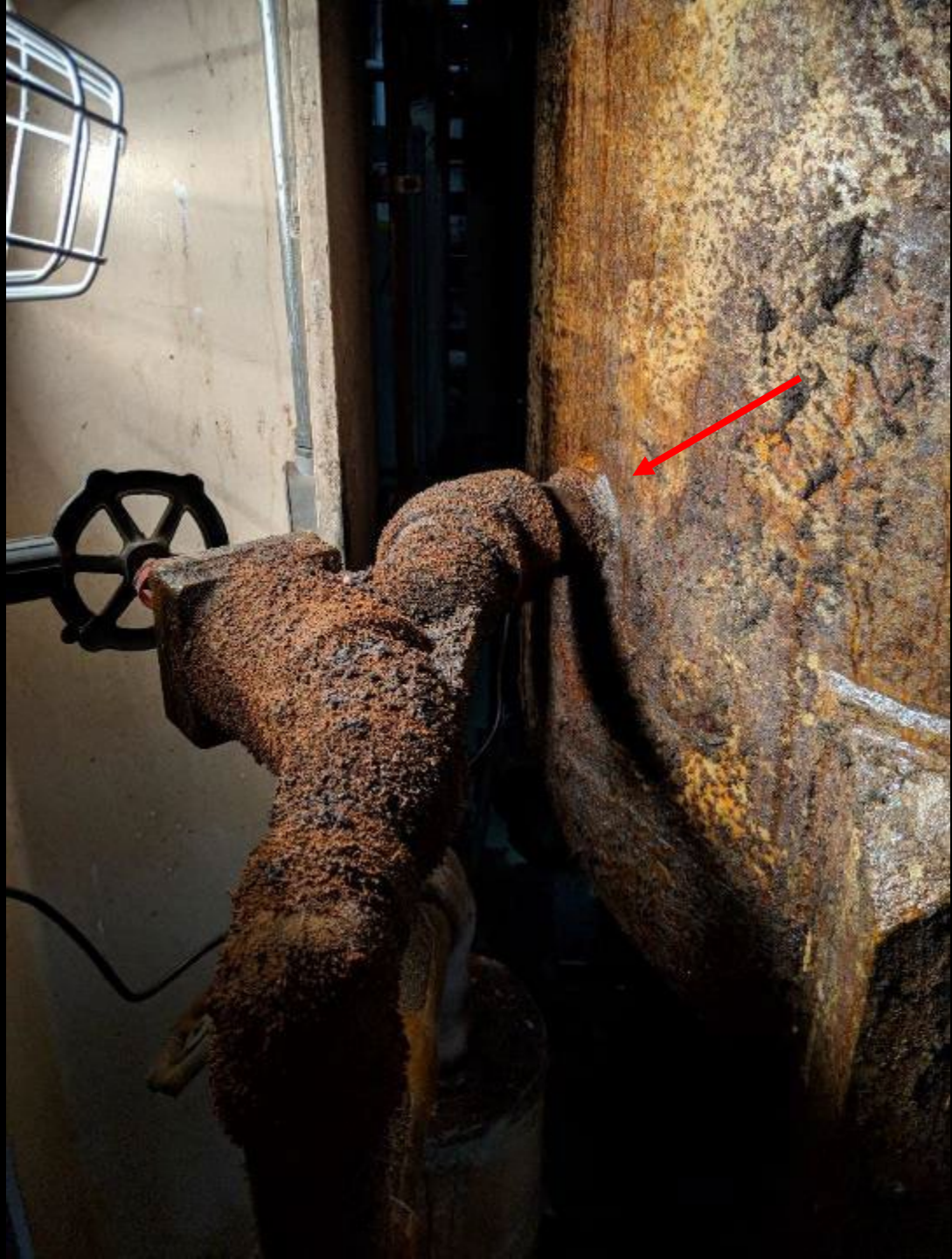
NEVINS CO.

P.O. 7611


































0.120"

Nominal  
Thickness of a  
3" Sch 80 Pipe  
is 0.300

60% Material  
Loss

**Table A.11.1.1.3.1  
Piping Sizes, Schedules, and Thicknesses (Carbon Steel Only)**

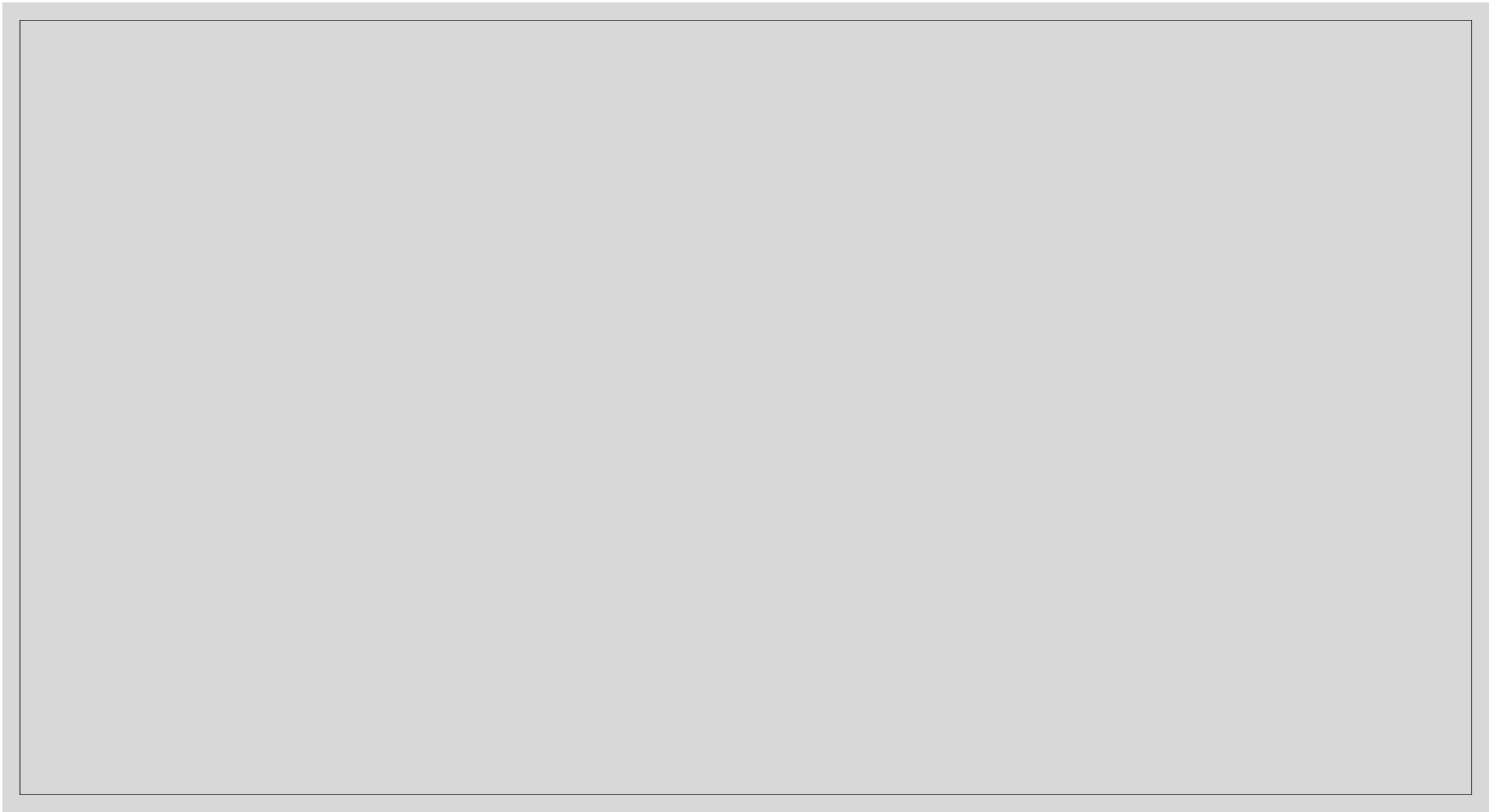
Pipe Size (in.) (OD)	Pipe Schedule	Nominal Thickness (in.)	*Mill Tolerance Thickness (in.)	Alert Thickness (in.)	Remaining Percentage from Nominal	Replacement Thickness (in.)	Remaining Percentage from Nominal	**Pressure T <sub>min</sub> (in.)
0.5 (0.840)	80	0.147	0.129	0.080	54%	0.044	30%	0.011
0.75 (1.050)	80	0.154	0.135	0.080	52%	0.046	30%	0.013
1 (1.315)	80	0.179	0.157	0.080	45%	0.054	30%	0.017
1.25 (1.660)	80	0.191	0.167	0.080	42%	0.057	30%	0.021
1.5 (1.900)	80	0.200	0.175	0.090	45%	0.060	30%	0.024
2 (2.375)	80	0.218	0.191	0.100	46%	0.065	30%	0.030
2 (2.375)	40	0.154	0.135	0.100	65%	0.046	30%	0.030
2.5 (2.875)	40	0.203	0.178	0.100	49%	0.061	30%	0.036
3 (3.500)	40	0.216	0.189	0.110	51%	0.065	30%	0.044
3.5 (4.000)	40	0.226	0.198	0.120	53%	0.068	30%	0.051
4 (4.500)	40	0.237	0.207	0.120	51%	0.071	30%	0.057
5 (5.563)	40	0.258	0.226	0.120	47%	0.081	31%	0.071
6 (6.625)	40	0.280	0.245	0.130	46%	0.094	34%	0.084
8 (8.625)	40	0.322	0.282	0.131	41%	0.119	37%	0.109
10 (10.750)	40	0.365	0.319	0.164	45%	0.146	40%	0.136
12 (12.750)	ST	0.375	0.328	0.194	52%	0.172	46%	0.162
14 (14.000)	ST	0.375	0.328	0.213	57%	0.188	50%	0.178
16 (16.000)	ST	0.375	0.328	0.244	65%	0.213	57%	0.203
18 (18.000)	ST	0.375	0.328	0.274	73%	0.238	64%	0.228
20 (20.000)	ST	0.375	0.328	0.305	81%	0.264	70%	0.254
24 (24.000)	ST	0.375	0.328	0.326	87%	0.315	84%	0.305

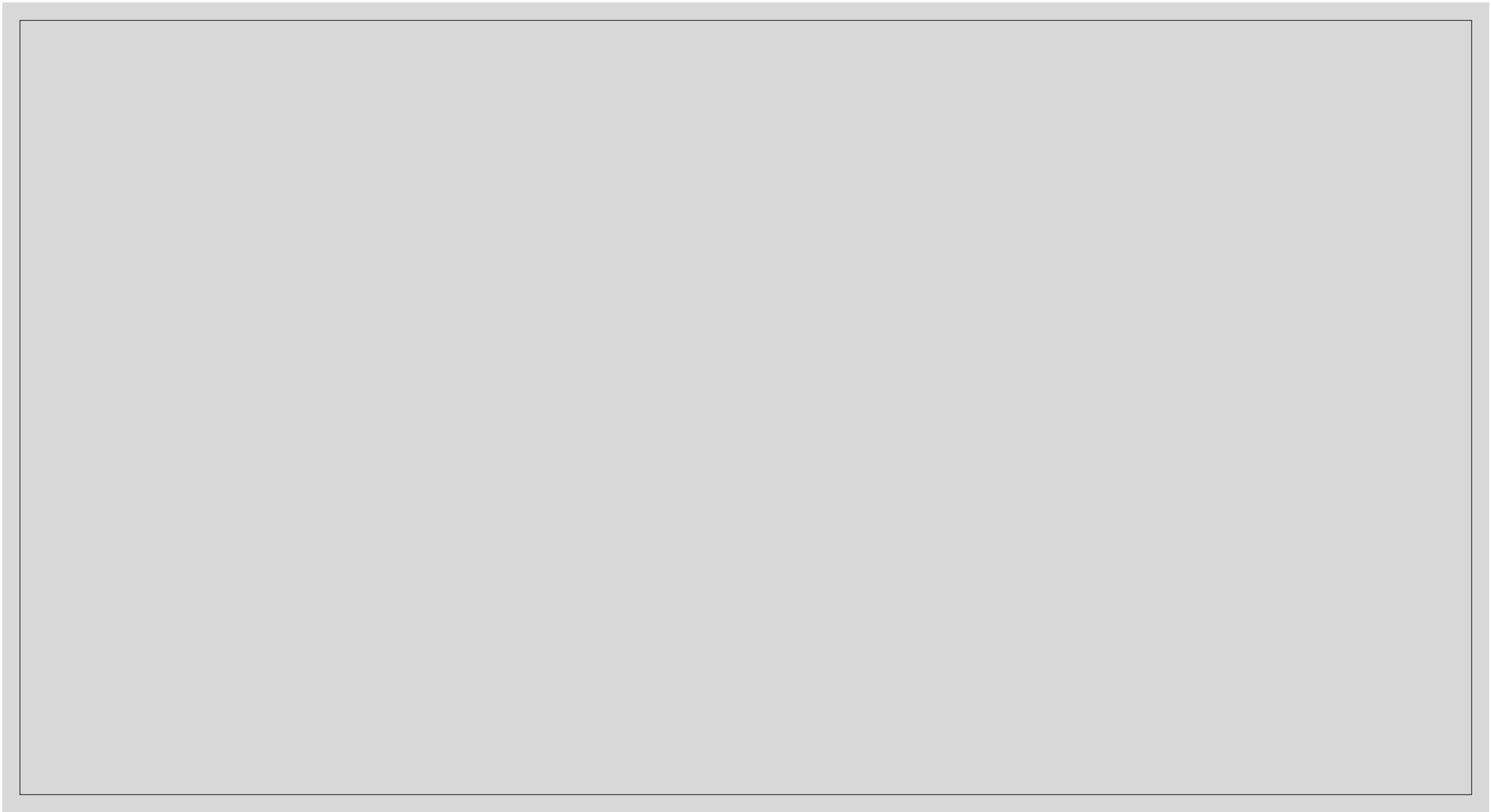
Adapted from *Principles and Practices of Mechanical Integrity Guidebook for Industrial Refrigeration Systems*.

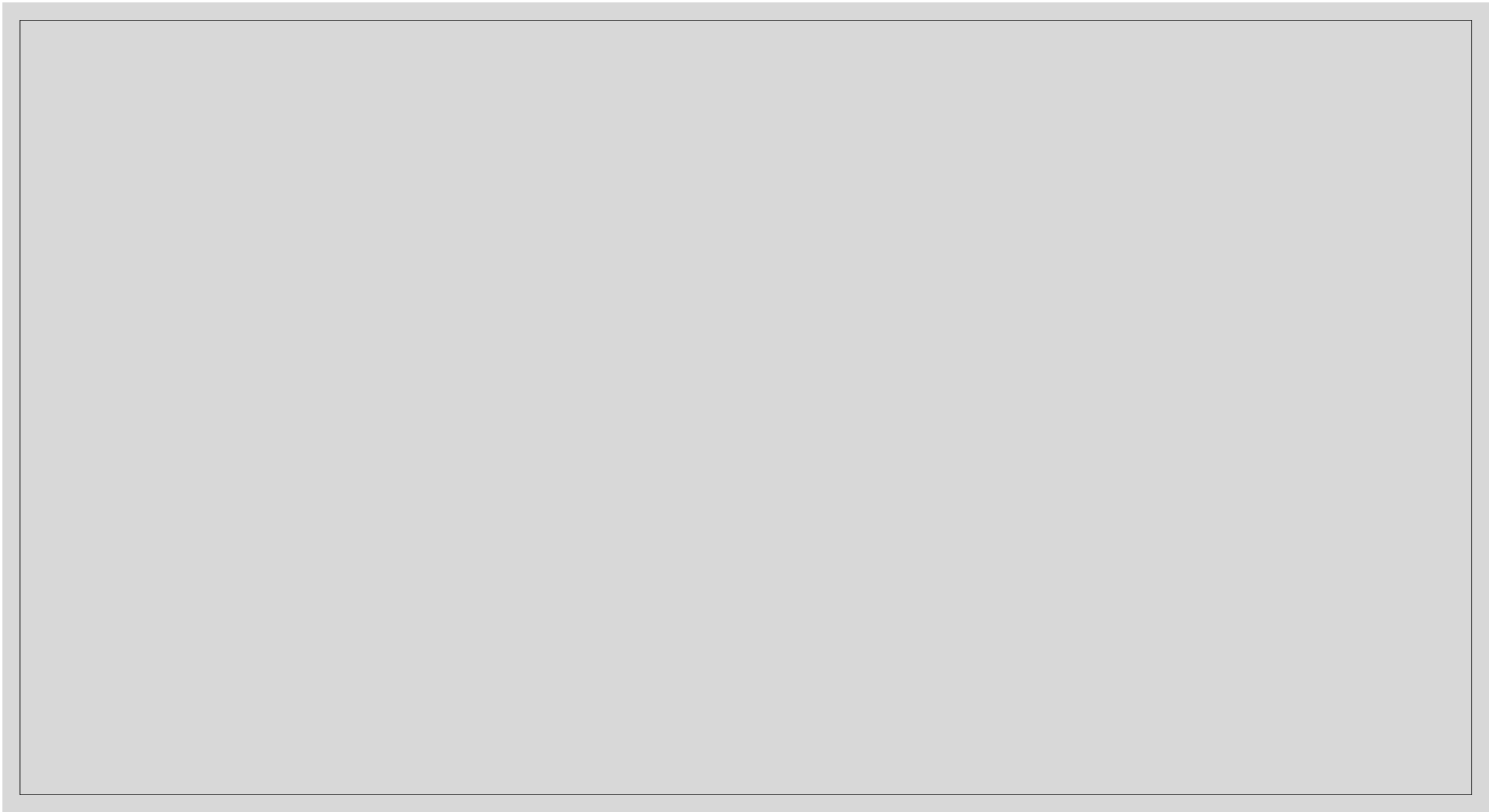
\*Mill Tolerance Thickness is 12.5% less than Nominal Thickness in accordance with ASME B31.5 and ASTM specifications.

\*\*Pressure T<sub>min</sub> is in accordance with ASME B31.5 (300 psi, A53 Gr A ERW, temperatures at or above -20 °F).

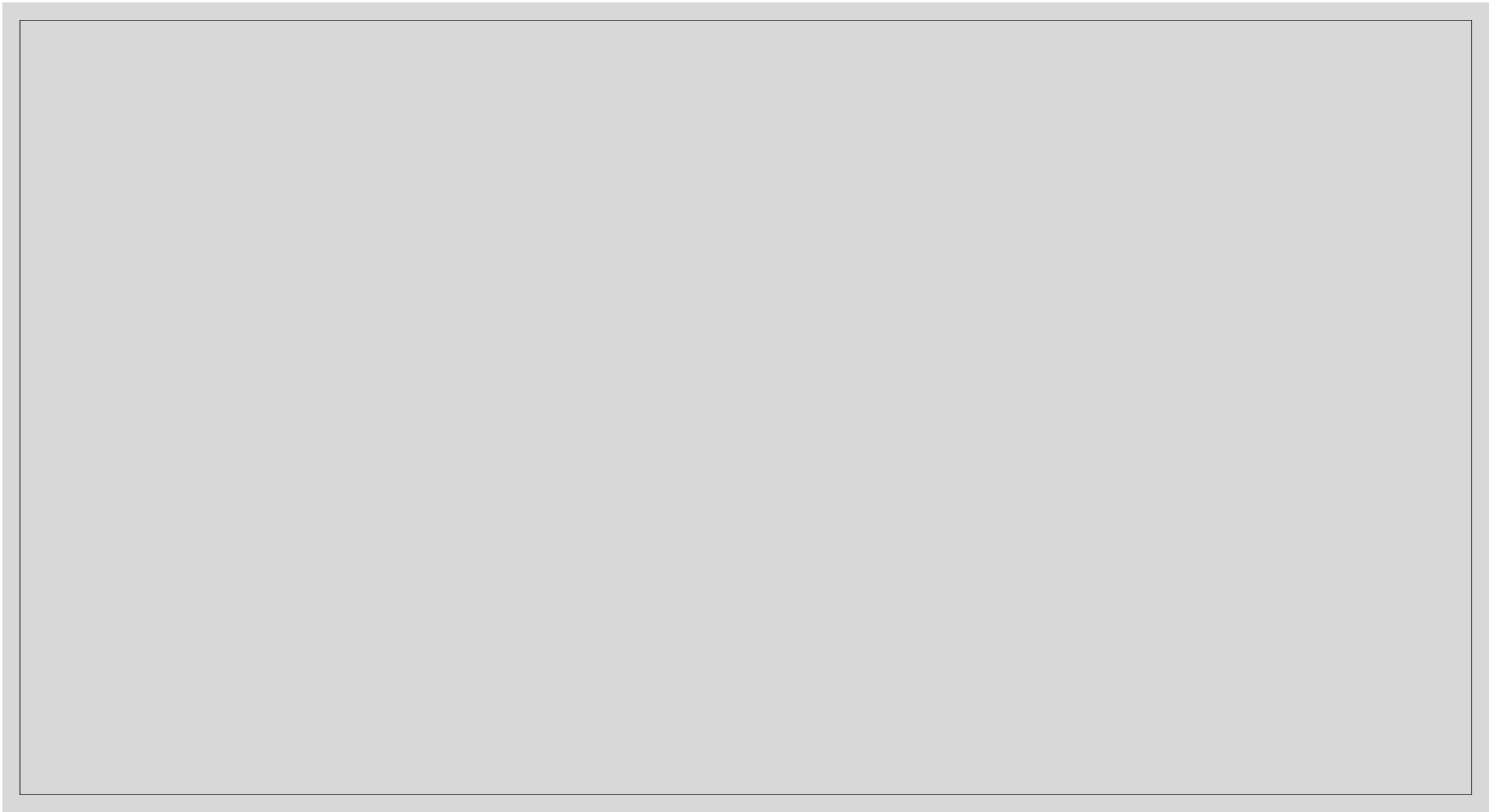
































Ammonia Refrigeration Safety Inspection Checklist	
PRESSURE VESSELS	
Location: _____	ID/Tag No.: _____
Facility Owner: _____	
Address: _____	
Contact: _____	Phone: _____
Inspector: _____	Date: _____

Application:

High Pressure Receiver..... <input type="checkbox"/>	Oil Separator..... <input type="checkbox"/>	Orientation:
Accumulator..... <input type="checkbox"/>	Oil Pot..... <input type="checkbox"/>	Horizontal..... <input type="checkbox"/>
Recirculator..... <input type="checkbox"/>	Other (Describe)..... <input type="checkbox"/>	Vertical..... <input type="checkbox"/>
Intercooler..... <input type="checkbox"/>		
Transfer Drum..... <input type="checkbox"/>		

**Equipment Data and Limits:**

Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 ASME Cert. Stamp?  Yes,  No Year Mfg.: \_\_\_\_\_ National Board #: \_\_\_\_\_  
 MAWP (psig): \_\_\_\_\_ @ °F \_\_\_\_\_ MDMT (°F): \_\_\_\_\_ @ psig \_\_\_\_\_  
 Operating (psig /°F): \_\_\_\_\_ / \_\_\_\_\_ Normal Liquid Level: \_\_\_\_\_  
 Total Internal Vol. \_\_\_\_\_ Cu. Ft. Normal Ammonia Inventory (lbs.): \_\_\_\_\_  
 Material:  Carbon Steel,  Stainless Steel,  Aluminum,  Other: \_\_\_\_\_  
 Level Indicator Type:  None,  Armored Bullseye,  Level Column w/Bullseye,  Flat Armored,  
 Level Column Only,  Level Column w/ Veri/Techni Level

**Relief Valve Data:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_ Year Installed: \_\_\_\_\_  
 Assembly:  Dual w/change over valve,  Single Type of Relief Valve:  Internal,  External  
 Pressure Setting (psig): \_\_\_\_\_ Capacity (lbs. air per min/SCFM): \_\_\_\_\_ / \_\_\_\_\_

Ammonia Refrigeration Safety Inspection Checklist				
PRESSURE VESSELS				
Location: _____		ID/Tag No.: _____		
Inspection Items	Conforms	Safety Status	Recommended Action, or Comments	Target Date
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
d) Fasteners tight, adequately anchored, and supported?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
f) Free of excessive ice buildup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
g) Free of abnormal sounds/vibration?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/TIAR 2?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/>			
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				

Inspection Items	Conforms
t) Free of any other conditions that negatively affect safe operation?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
If No, describe: _____ _____	

t) Free of any other conditions that negatively affect safe operation?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
If No, describe: _____ _____	





## Ammonia Refrigeration Safety Inspection Checklist

### PRESSURE VESSELS

Inspection Items	Confirms	Safety Status	Recommended Action, or Comments	Target Date
Location: _____ ID/Tag No.: _____				
a) Equipment is labeled and the nameplate and ASME # are legible and secure per ANSI/IIAR 2?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
b) Suitable for ammonia?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
c) Operating within limits?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>		14" + 150 PSI	
d) Fasteners tight, adequately anchored, and supported?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
e) Safe access for Inspection, Testing, and Maintenance (ITM)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>		CANNOT REACH KING VALVE FROM THE GROUND	
f) Free of excessive ice buildup?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>		HIGH-SIDE OF SYSTEM	
g) Free of abnormal sounds/vibration?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
h) Free of ammonia leaks?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
i) All piping has markers per ANSI/IIAR 2?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
j) Are valves in good condition?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
k) Are critical manual and control valves tagged, exercised, and stems lubricated?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>		KING VALVE HAS COBWEBB. AROUND HANDWHEEL	
l) Sufficient pressure/temperature gauges and/or transducers are present and functioning adequately?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
m) Certification drawings on file?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>		NO HB, DATA REPORT, OR DRAWING	
n) Manufacturer data report on file?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>			
o) Free of modifications, alterations, damage, or repairs such that casing integrity is or has been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>		?UNKNOWN. NEED DATA REPORT	
p) If No, has it been recertified and documentation filed?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
q) Are tubular linear liquid level sight glasses protected from traffic with 360° guards and internal check shutoff valves?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
r) Insulation free of damage, moisture, frost, vapor retarder leaks, etc.? a. If No, note damage level:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Extensive <input type="checkbox"/> <input checked="" type="checkbox"/> Not insulated			
s) Free of pitting and surface damage? a. If No, note damage level:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Extensive <input type="checkbox"/>		SEVERAL SCRATCHES HAVE REMOVED PAINT	
t) Free of any other conditions that negatively affect safe operation?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			
If No, describe: _____ _____				





# Questions?

[pthomas@resourcecompliance.com](mailto:pthomas@resourcecompliance.com)