

American National Standard

*Safety Requirements for
the Storage and Handling
of Anhydrous Ammonia*

 **ANSI** American National Standards Institute
1430 Broadway
New York, New York
10018

to the shells and heads. The method employed shall be as prescribed in the ASME Code. It is recommended that post-weld heat treatment be performed in a furnace of a size sufficient to accommodate the entire container. Welded attachments to pads may be made after post-weld heat treatment. [8]

5.2.2.2 Steels used in fabricating pressure-containing parts of a container shall have a tensile strength no greater than a nominal 70 000 psi (480 MPa) (does not apply to Sections 8, 9, and 10).

5.2.3 All containers, except refrigerated storage tanks with a design pressure of 15 psig (100 kPa) and less, and cylinders and containers covered in Section 8, shall be inspected by a person who holds a valid National Board Commission as an Authorized Inspector or as an Owner-User Inspector as defined in the National Board Inspection Code. [11]

5.2.4 Welding for the repair or alteration of pressure-containing parts of a container shall be performed in compliance with the applicable provisions of the current edition of the National Board Inspection Code. [11] Where specific procedures are not given, it is intended that subject to acceptance of the Inspector, all repair or alteration shall conform insofar as possible to the ASME Code section and edition to which the container was constructed.

5.3 Location of Containers

5.3.1 Selection of a location for a storage container shall be made considering the potential

physiological and environmental effects of ammonia on the surroundings adjacent to the proposed site. Containers shall be located outside of buildings except in buildings or sections thereof especially approved for the purpose.

5.3.2 Containers shall be located at least 50 feet (15 m) from a dug well or other sources of potable water supply, unless the container is a part of a water treatment installation.

5.3.3 The minimum distance of a storage container to dwellings or to population centers shall be in accordance with the requirements of the local jurisdiction having authority.

5.3.4 Container locations shall comply with Table 3.

5.3.5 Container storage areas shall be accessible to emergency vehicles and personnel.

5.3.6 Areas within 10 feet (3 m) of a storage container shall be maintained clear of dry grass and weeds and other combustible materials.

5.4 Markings of Non-Refrigerated Containers and Systems Other than DOT Containers

5.4.1 Each system nameplate, when required, shall be made of a noncorroding metal permanently attached to the system by continuous welding around its perimeter, and located so as to be readily accessible for inspection. Nameplates shall be maintained in legible condition and include markings as prescribed in 5.4.2.

TABLE 3
MINIMUM DISTANCES FOR LOCATION OF AMMONIA STORAGE CONTAINERS
(Customary Units and SI Units)

Nominal Capacity of Container (Gallons or Cubic Meters)	Minimum Distances (in feet or meters) from Each Container to:		
	Line of Adjoining Property which may be built upon, Highways & Mainline of Railroad	Place of Public Assembly	Institution Occupancy
* Over 500 to 2000 gals	25 ft	150 ft	250 ft
Over 2000 to 30 000 gals	50 ft	300 ft	500 ft
Over 30 000 to 100 000 gals	50 ft	450 ft	750 ft
Over 100 000 gals	50 ft	600 ft	1 000 ft
Over 2 to 8 m ³	8 m	45 m	75 m
Over 8 to 110 m ³	15 m	90 m	150 m
Over 110 to 400 m ³	15 m	140 m	230 m
Over 400 m ³	15 m	180 m	300 m

*NOTE: For 500 gallons (2m³) or less, see 5.3.1 and 5.3.3.