



COMPRESSED GAS ASSOCIATION, INC.

SAFETY ALERT

SA-18—2007

4221 WALNEY ROAD, 5TH FLOOR
CHANTILLY, VA 20151
703-788-2700
cga@cganet.com

HYDROGEN SAFETY AWARENESS

CGA is publishing this safety alert in the interest of worker safety and to provide more details about the standards and recommended practices for hydrogen storage and delivery systems.

A fatality occurred in early January 2007 when high pressure gaseous hydrogen was being delivered from a tube trailer to a ground storage system. Investigations of this incident are ongoing and no conclusions have been published.

It is the responsibility of the system owners that the delivery and storage systems comply with all applicable codes and standards to ensure a safe delivery.

The following publications provide recommendations and guidelines for the safe design, installation, delivery, inspection, and operation of hydrogen systems. These publications are based on years of successful operating experience and represent best practices by companies actively working with hydrogen.

- CGA G-5, *Hydrogen* provides information on the general properties of hydrogen, including the safety aspects.
- CGA G-5.4, *Standard for Hydrogen Piping Systems at Consumer Locations* gives details on how to install piping and which materials to use.
- CGA G-5.5, *Hydrogen Vent Systems* explains how to vent hydrogen safely, protect safety relief devices from the environment to avoid ground-level venting hazards, and addresses the requirement for routine inspections.
- CGA S-1.3, *Pressure Relief Device Standards—Part 3—Stationary Storage Containers for Compressed Gases* gives the sizing, selection, and maintenance criteria for pressure relief devices on liquid and gas hydrogen stationary storage containers.
- CGA S-1.2, *Pressure Relief Device Standards—Part 2—Cargo and Portable Tanks for Compressed Gases* provides the sizing, selection, and maintenance criteria for pressure relief devices on liquid and gas hydrogen transport equipment.
- NFPA 55, *Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks* gives the setback distances for locating hydrogen supply systems and ensuring that they are separated from hazards. It also provides details on when to use the electrical classified area provisions of NFPA 70, *National Electrical Code*® (NEC).



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A listing of all publications, audiovisual programs, safety and technical bulletins, and safety posters is available via the Internet at our website at www.cganet.com. For more information contact CGA at Phone: 703-788-2700, ext. 799. E-mail: customerservice@cganet.com.

Bulk Distribution and Equipment Committee

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