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Hydrogen Vehicle and Infrastructure Codes and Standards Citations

This document lists codes and standards typically used for U.S. hydrogen vehicle and infrastructure projects. To determine which codes and standards apply to a specific project, identify the codes and standards currently in effect within the jurisdiction where the project will be located. Some jurisdictions also have unique ordinances or regulations that could apply.

Learn about codes and standards basics at www.afdc.energy.gov/afdc/codes_standards_basics.html.

Find hydrogen vehicle and infrastructure codes and standards in these categories:

- Annual Inspections
- Balance of Plant
- Canopy Tops
- Compressed Hydrogen Gas Storage
- Compression Systems and Equipment
- Design
- Dispensing
- Dispensing, Operations, and Maintenance Safety
- Fire Safety
- Liquid Hydrogen Storage
- On-Site Hydrogen Production
- Operation Approvals
- Setbacks and Footprints
- Outdoor Gaseous Systems
- Transportation
- Vaporizers

Annual Inspections

CGA G-5.4, Standard for Hydrogen Piping Systems at Consumer Locations (Compressed Gas Association, 2005)

- 7.0 Maintenance and Repair

CGA G-5.5, Hydrogen Vent Systems (Compressed Gas Association, 2004)

- 9 Maintenance

International Fire Code (International Code Council, 2009)

- 406.2 Frequency
- 901.6.2 Records
- 907.2 Inspection, Testing, and Maintenance
- 2206.2.1.1 Inventory Control for Underground Tanks

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- 3204.5.2 Corrosion Protection
- 3205.4 Filling and Dispensing

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.2.15 General System Requirements

Balance of Plant

Piping & Tubing

ASME B31.3, Process Piping (American Society of Mechanical Engineers, 2006)

- F323.4(5) Specific Material Considerations-Metals
- IX K305 Pipe
- ASME B31.12, Hydrogen Piping and Pipelines

CGA G-5.4, Standard for Hydrogen Piping Systems at Consumer Locations (Compressed Gas Association, 2005)

- 3.1 General
- 3.2 Piping Materials
- 5.0 Installation
- 5.1 Piping Installation General
- 5.2 Piping Installation Above Ground Installation
- 5.3 Piping Installation Underground Installation

International Fire Code (International Code Council, 2009)

- 2201.1 Scope
- 2209.3.2.3 Indoors
- 2209.3.2.6 Canopy Tops
- 3501.1 Scope

International Fuel Gas Code (International Code Council, 2009)

- 101.2.1 Gaseous Hydrogen Systems
- 704 Piping, Use, and Handling
- 705 Testing of Hydrogen Piping Systems

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.8 Installation of Piping and Hoses
- 9.9 System Testing

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 11.2.3 Piping, Tubing, and Fittings

CGA H-3 Cryogenic Hydrogen Storage (Compressed Gas Association, 2006)

- 10.0 External piping

Pressure Relief

CGA S-1.3, PRD Standards Part 3 - Stationary Storage Containers for Compressed Gases (Compressed Gas Association, 2005)

- 5.3.2 Nonliquid Compressed Gases

International Fire Code (International Code Council, 2009)

- 2209.2.1 Approved Equipment
- 2209.5.4.2 Pressure Relief Devices
- 3003.3 Pressure Relief Devices
- 3203.2 Pressure Relief Devices
- 3203.3 Pressure Relief Vent Piping
- 3203.5.4 Physical Protection
- 3203.8 Service and Repair
- 3205.1.2.3.2 Shutoff Valves on Piping

International Fuel Gas Code (International Code Council, 2009)

- 703.3 Pressure Relief Devices

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 5.4 Pressure Relief Devices
- 5.6 Pressure Gauges
- 5.7 Pressure Regulators
- 9.6 Installation of Pressure Regulators
- 9.7 Installation of Pressure Gauges
- 14.6 Pressure Relief Devices

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 7.1.2.5 Pressure-Relief Devices
- 10.2.1 Pressure-Relief Devices

Valving & Fittings

ASME B31.3, Process Piping (American Society of Mechanical Engineers, 2006)

- IX K306 Fittings, Bends, and Branch Connections
- IX K307 Valves and Specialty Components

CGA G-5.4, Standard for Hydrogen Piping Systems at Consumer Locations (Compressed Gas Association, 2005)

- 3.3.2 Isolation Valves
- 3.3.3 Emergency Isolation Valves
- 3.3.4 Excess Flow Valves
- 3.3.5 Check Valves
- 3.3.7 Gasket and Sealing Materials
- 3.3.8 Additional Requirements
- 5.0 Installation
- 5.1 Installation General

International Fire Code (International Code Council, 2009)

- 2209.5.2 Emergency Shutoff Valves
- 2211.8.1.2.4 Grounding and bonding
- 2703.2.2 Piping, Tubing, Valves, and Fittings
- 2703.9.3 Protection from Vehicles
- 2703.10.1 Valve Protection
- 2705.1.10 Liquid Transfer
- 3003.6 Valve Protection
- 3005.3 Piping Systems
- 3005.4 Valves
- 3203.2.6 Shutoffs Between Pressure Relief Devices and Containers
- 3205.1.2 Piping Systems
- 3205.3.2 Emergency Shutoff Valves
- 3503.1.3 Emergency Shutoff

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 5.9 Valves

Venting and Other Equipment

CGA G-5.5, Hydrogen Vent Systems (Compressed Gas Association, 2004)

- 6.0 Vent System

- 6.2 Sizing
- 6.3 Design
- 6.4 Materials
- 6.5 Components
- 7 Installation

International Fire Code (International Code Council, 2009)

- 2209.5.4 Venting of Hydrogen Systems
- 2211.8.1.2 Atmospheric Venting of Hydrogen from Motor Vehicle Fuel Storage Containers
- 3003.16.8 Connections
- 3005.5 Venting
- 3203.3 Pressure Relief Vent Piping
- 3204.4.5 Venting of Underground Tanks

International Fuel Gas Code (International Code Council, 2009)

- 703.4 Venting

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 5.5 Vent Pipe Termination
- 9.3.3.3 Indoors

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 10.2.2 Pressure-Relief Devices

Canopy Tops

International Building Code (International Code Council, 2009)

- 406.5.2.1 Canopies use to support gaseous hydrogen systems

International Fire Code (International Code Council, 2009)

- 2209.3.2.6 Canopy Tops
- 2209.3.3 Canopies

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.3.2.3 Outdoors

Compressed Hydrogen Gas Storage

Equipment Location

International Fire Code (International Code Council, 2009)

- 2209.3 Location on Property
- 3503 General Requirements
- 3504 Storage

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.3 System Siting

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 10.3.2 Specific Requirements

General Safety Requirements

International Fire Code (International Code Council, 2009)

- 2209.5 Safety Precautions
- 2211.7 Repair Garages for Vehicles Fueled by Lighter-than-Air Fuels
- 2211.8 Defueling of Hydrogen from Motor Vehicle Fuel Storage Containers
- 3003 General Requirements
- 3503 General Requirements

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.2.3 Equipment Security and Vehicle Protection
- 9.2.4 Out of Service Bulk Storage
- 9.2.5 Equipment Security and Vehicle Protection
- 9.2.6 Cargo Transport Unloading
- 9.2.7 Control Device Icing
- 9.2.8 Vehicle Ignition Classification
- 9.2.9 Fueling Connection Leak Prevention
- 9.2.10 Compression and Processing Equipment
- 9.2.11 Reference to NFPA 37 for Compressor Installations
- 9.2.12 Electrical Classification for Compressors
- 9.2.13 Liquid Carryover Prevention
- 9.2.14 Detection for Dispensing Equipment
- 9.2.15 General System Requirements

- 9.2.16 General System Requirements

NFPA 55, Standard for Storage, Use and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders and Tanks (National Fire Protection Association, 2005)

- 7.1.4 Security

Storage Containers

CGA PS-20, Direct Burial of Gaseous Hydrogen Storage Tanks (Compressed Gas Association, 2006)
CGA PS-21, Adjacent Storage of Compressed Hydrogen and Other Flammable Gases (Compressed Gas Association, 2005)
International Fire Code (International Code Council, 2009)

- 2703.2.1 Design and Construction of Containers, Cylinders, and Tanks
- 3003.2 Design and Construction
- 3503.1.2 Storage Containers

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 5.3 Design and Construction of Containers

Compression Systems and Equipment

International Fire Code (International Code Council, 2009)

- 2209.2 Equipment
- 2209.3 Location on Property
- 2209.5.3.1 System Requirements
- 2209.5.4.2.1 Minimum Rate of Discharge

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.2.7 Control Device Icing
- 9.2.8 Vehicle Ignition Classification
- 9.2.9 Fueling Connection Leak Prevention
- 9.2.10 Compression and Processing Equipment
- 9.2.11 Reference to NFPA 37 for Compressor Installations
- 9.2.12 Electrical Classification for Compressors
- 9.2.13 Liquid Carryover Prevention
- 9.2.14 Detection for Dispensing Equipment
- 9.3.1 General
- 14.8 Stationary Pumps and Compressors

Design

Barrier Walls

International Fire Code (International Code Council, 2009)

- 2209.3.1.1 Barrier Wall Construction – Gaseous Hydrogen

Equipment

International Fire Code (International Code Council, 2009)

- 2209.2 Equipment

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.2 General System Requirements

Fuel Stations

International Fire Code (International Code Council, 2009)

- 35 Flammable Gases
- 2209.1 General

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 7.3 Motor Fuel Dispensing Facilities

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.3 System Siting
- 14.2 Facility Design

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 7.1.6 Separation from Hazardous Conditions

Weather Protection

International Fire Code (International Code Council, 2009)

- 2209.3.2.2 Weather Protection
- 2704.13 Weather Protection

Dispensing

Electrical Equipment

International Fire Code (International Code Council, 2009)

- 2201.5 Electrical
- 2205.4 Sources of Ignition
- 2209.2.3 Electrical Equipment

- 2211.3.1 Equipment
- 2211.8.1.2.4 Grounding and bonding
- 2703.9.4 Electrical Wiring and Equipment
- 3003.8 Wiring and Equipment
- 3003.16.14 Classified Areas
- 3203.7 Electrical Wiring and Equipment
- 3503.1.5.1 Bonding of Electrically Conductive Materials and Equipment

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 6.7 Emergency Electrical Disconnects
- 8 Electrical Installations

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.11 Installation of Electrical Equipment
- 9.12 Stray or Impressed Currents and Bonding

Fuel Lines

CGA G-5.4, Standard for Hydrogen Piping Systems at Consumer Locations (Compressed Gas Association, 2005)

- 3.0 Piping System Criteria

International Fire Code (International Code Council, 2009)

- 2201 Scope
- 2209.3.2.3 Indoors
- 2209.3.2.6 Canopy Tops
- 3501.1 Scope

International Fuel Gas Code (International Code Council, 2009)

- 101.2.1 Gaseous Hydrogen Systems
- 704 Piping, Use, and Handling
- 705 Testing of Hydrogen Piping Systems

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 5.8 Fuel Lines

Gaseous Dispensers

International Fire Code (International Code Council, 2009)

- 2209.2 Equipment
- 2209.3 Location on Property

- 2209.4 Dispensing into Motor Vehicles at Self-Service Hydrogen Motor Fuel-Dispensing Facilities

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.2 General System Requirements
- 9.3 System Siting

Hoses and Connectors

International Fire Code (International Code Council, 2009)

- 2209.2 Equipment

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 5.10 Hose and Hose Connections

Liquid Dispensers

International Fire Code (International Code Council, 2009)

- 2206.7.4 Dispenser Emergency Valve
- 2206.7.5 Dispenser Hose
- 2206.7.6 Fuel Delivery Nozzles
- 2209.2 Equipment
- 2209.3 Location on Property
- 2209.4 Dispensing into Motor Vehicles at Self-Service Hydrogen Motor Fuel-Dispensing Facilities

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 6.3 Requirements for Dispensing Devices

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 14 Liquid Hydrogen Fueling Facilities

Vehicle Connectors

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 5.11 Vehicle Fueling Connection

SAE J2600, Compressed Hydrogen Surface Vehicle Refueling Connection Devices (Society of Automotive Engineers, 2002)

Dispensing, Operations, and Maintenance Safety

Gaseous Hydrogen

CGA G-5.5, Hydrogen Vent Systems (Compressed Gas Association, 2004)

- 9 Maintenance

International Fire Code (International Code Council, 2009)

- 2204 Dispensing Operations
- 2209.4 Dispensing into Motor Vehicles at Self-Service Hydrogen Motor Fuel-Dispensing Facilities

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 9.2.2 Tank Filling and Bulk Delivery
- 9.4 Operating Requirements for Attended Self-Service Motor Fuel Dispensing Facilities
- 9.5 Operating Requirements for Unattended Self-Service Motor Fuel Dispensing Facilities

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.13 System Operation
- 9.14 Fire Protection
- 9.15 Maintenance System

Liquid Hydrogen

CGA G-5.5, Hydrogen Vent Systems (Compressed Gas Association, 2004)

- 9 Maintenance

International Fire Code (International Code Council, 2009)

- 2204 Dispensing Operations
- 2209.4 Dispensing into Motor Vehicles at Self-Service Hydrogen Motor Fuel-Dispensing Facilities

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 9.2.2 Tank Filling and Bulk Delivery
- 9.4 Operating Requirements for Attended Self-Service Motor Fuel Dispensing Facilities
- 9.5 Operating Requirements for Unattended Self-Service Motor Fuel Dispensing Facilities

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 14.4.6 Liquid Hydrogen Vehicle Dispensing Systems

- 14.4.9 Liquid Hydrogen Vehicle Dispensing Systems
- 14.4.10 Liquid Hydrogen Vehicle Dispensing Systems
- 14.4.11 Liquid Hydrogen Vehicle Dispensing Systems
- 14.13 Maintenance

Fire Safety

Construction

International Fire Code (International Code Council, 2009)

- 911 Explosion Control
- 2209.5 Safety Precautions

International Fuel Gas Code (International Code Council, 2009)

- 706.3 Outdoor Gaseous Hydrogen Systems

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.12 Stray or Impressed Currents and Bonding

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 7.1.6 Separation from Hazardous Conditions

Equipment

International Fire Code (International Code Council, 2009)

- 404 Fire Safety and Evacuation Plan
- 406 Employee Training and Response Procedures
- 407 Hazard Communication
- 906 Portable Fire Extinguishers
- 907 Fire Alarm and Detection Systems
- 2209.4 Dispensing into Motor Vehicles at Self-Service Hydrogen Motor Fuel-Dispensing Facilities
- 2209.5 Safety Precautions

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.2.3 Equipment Security and Vehicle Protection
- 9.2.4 Out of Service Bulk Storage
- 9.2.5 Equipment Security and Vehicle Protection
- 9.2.15 General System Requirements
- 9.3.3 Indoors

- 9.14 Fire Protection
- 14.2.4 Indoor Fueling
- 14.4.3 Liquid Hydrogen Vehicle Dispensing Systems

Signage

International Fire Code (International Code Council, 2009)

- 2204.3.5 Emergency Procedures
- 2209.5.2.1 Identification

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.3.3.12 Warning Signs

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 6.12 Hazard Identification Signs
- 10.2.4 Marking
- 11.3.1.4 General

Liquid Hydrogen Storage

Equipment Location

International Fire Code (International Code Council, 2009)

- 2209.3 Location on Property
- 3203.5.4 Physical Protection
- 3203.6 Separation from Hazardous Conditions
- 3204.3.1.1 Location
- 3204.4.2 Location
- 3504 Storage

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 11.3.1 General
- 11.3.2 Specific Requirements

General Safety Requirements

International Fire Code (International Code Council, 2009)

- 2209.5 Safety Precautions
- 2211.7 Repair Garages for Vehicles Fueled by Lighter-than-Air Fuels
- 2211.8 Defueling of Hydrogen from Motor Vehicle Fuel Storage Containers

- 3003 General Requirements
- 3203 General Safety Requirements
- 3503 General Requirements

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 14.2 Facility Design

Storage Containers

International Fire Code (International Code Council, 2009)

- 2703.2 Systems, Equipment, and Processes
- 3203.1 Containers
- 3203.5 Security
- 3203.6 Separation from Hazardous Conditions
- 3204.3.1 Stationary Containers
- 3204.4 Underground Tanks

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 5.3 Design and Construction of Containers

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 11.3.2 Specific Requirements
- 11.4.2 Underground Tanks

CGA H-3 Cryogenic Hydrogen Storage (Compressed Gas Association, 2006)

- 6.0 Tank design and manufacturing criteria
- 7.0 Inner vessel
- 8.0 Outer jacket

On-Site Hydrogen Production

International Fire Code (International Code Council, 2009)

- 2209.3.1 Separation from Outdoor Exposure Hazards

International Fuel Gas Code (International Code Council, 2009)

- 703.1 General Requirements

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 5.2 System Approvals

Operation Approvals

Dispensing

International Fire Code (International Code Council, 2009)

- 2204.2 Attended Self-Service Motor Fuel-Dispensing Facilities
- 2204.3 Unattended Self-Service Motor Fuel-Dispensing Facilities
- 2209.4 Dispensing into Motor Vehicles at Self-Service Hydrogen Motor Fuel-Dispensing Facilities

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 6.2 General Requirements
- 6.3 Requirements for Dispensing Devices

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 14.4.1 Liquid Hydrogen Vehicle Dispensing Systems
- 14.4.2 Liquid Hydrogen Vehicle Dispensing Systems
- 14.4.3 Liquid Hydrogen Vehicle Dispensing Systems
- 14.4.11 Liquid Hydrogen Vehicle Dispensing Systems

Fire And Emergency Planning

International Fire Code (International Code Council, 2009)

- 404 Fire Safety and Evacuation Plan
- 406 Employee Training and Response Procedures
- 407 Hazard Communication
- 906 Portable Fire Extinguishers
- 907 Fire Alarm and Detection Systems
- 2209.3.2.6.2 Fire-Extinguishing Systems
- 2209.4 Dispensing into Motor Vehicles at Self-Service Hydrogen Motor Fuel-Dispensing Facilities
- 2209.5.1 Protection from Vehicles
- 2209.5.2 Emergency Shutoff Valves
- 2209.5.3 Emergency Shutdown Controls
- 2209.5.4 Venting of Hydrogen Systems

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 7.3.5 Fixed Fire Protection

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.2.16 General System Requirements
- 9.10.5 Installation of Emergency Shutdown Equipment

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 4.1 Permits
- 4.2 Emergency Plan
- 7.1.6 Separation from Hazardous Conditions

Fuel Delivery

International Fire Code (International Code Council, 2009)

- 105.6.8 Compressed Gases
- 105.6.10 Cryogenic Fluids
- 2205.1 Tank Filling Operation for Class I, II, or IIIA Liquids
- 3205.4 Filling and Dispensing

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 6.3.7 Requirements for Dispensing Devices

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.2.3 Equipment Security and Vehicle Protection

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 10.3 Location of Gaseous Hydrogen Systems

Ignition Control

International Fire Code (International Code Council, 2009)

- 2209.3.2.3.3 Ignition Source Control
- 3503.1.4 Ignition Source Control

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 4.8 Ignition Source Controls
- 7.6.3 Ignition Source Control

Personnel Issues and Training

International Fire Code (International Code Council, 2009)

- 406 Employee Training and Response Procedures

- 2209.4 Dispensing into Motor Vehicles at Self-Service Hydrogen Motor Fuel-Dispensing Facilities

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 9.4 Operating Requirements for Attended Self-Service Motor Fuel Dispensing Facilities

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 4.6 Personnel Training
- 4.7 Fire Department Liaison

Signage

International Fire Code (International Code Council, 2009)

- 2204.3.5 Emergency Procedures
- 2209.3.2.3.2 Smoking
- 2209.3.2.6.3 Signage
- 2209.5.2.1 Identification

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.3.3.12 Warning Signs

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 4.9 Signs

Vehicle Access

International Fire Code (International Code Council, 2009)

- 105.6.8 Compressed Gases
- 105.6.10 Cryogenic Fluids
- 105.6.39 Repair Garages and Motor Fuel-Dispensing Facilities
- 404.3.2 Fire Safety Plans
- 3205.4 Filling and Dispensing

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (National Fire Protection Association, 2003)

- 6.3.7 Requirements for Dispensing Devices

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.2.3 Equipment Security and Vehicle Protection
- 14.2.1.6 General

- 14.4.2 Liquid Hydrogen Vehicle Dispensing Systems
- 14.4.5 Liquid Hydrogen Vehicle Dispensing Systems

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 10.3 Location of Gaseous Hydrogen Systems

Setbacks and Footprints

Liquid Systems

International Fire Code (International Code Council, 2009)

- 2209.3.1 Separation from Outdoor Exposure Hazards

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 14.2.2 Siting

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 11.3.2.1 Specific Requirements
- 11.3.2.2 Specific Requirements

Outdoor Gaseous Systems

International Fire Code (International Code Council, 2009)

- 2209.3.1 Separation from Outdoor Exposure Hazards

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 9.3.1.3 General

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 10.3.2.1 Specific Requirements
- 10.3.2.2 Minimum Distance

Transportation

Compressed Hydrogen Gas

CGA P-1, Safe Handling of Compressed Gases in Containers (Compressed Gas Association, 2006)

- 4.1 Transportation Regulating Authorities
- 4.2 Container Regulations
- 4.3 Container Filling Regulations
- 4.4 Regulating Authorities of Employee Safety and Health

- 6.2 Flammable Gases

International Fire Code (International Code Council, 2009)

- 2705 Use, Dispensing, and Handling
- 3005.7 Transfer
- 3505 Use

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 4 General Requirements
- 7.3.1.10 Use and Handling

Liquid Hydrogen

CGA P-12, Safe Handling of Cryogenic Liquids (Compressed Gas Association, 2005)

- 5.5.4 Additional Safety Practices for Liquid Hydrogen
- 6.4 Hydrogen Fires
- 7.9 Handling Considerations for Hydrogen and Helium Transfer

International Fire Code (International Code Council, 2009)

- 2705 Use Dispensing and Handling
- 3201.1 Scope
- 3203.6.1.1 Point-of-Fill Connections
- 3205.4.2 Vehicle Loading and Unloading Areas

NFPA 52, Vehicular Gaseous Fuel Systems Code (National Fire Protection Association, 2010)

- 14.3 Cargo Transport Unloading

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 4 General Requirements
- 8.3.5 Overfilling
- 8.13.1.2 Attended Delivery
- 8.13.10.3 Filling and Dispensing

Natural Gas

ASME B31.8, Gas Transmission and Distribution Systems (American Society of Mechanical Engineers, 2003)

Vaporizers

International Fire Code (International Code Council, 2009)

- 2209.2 Equipment
- 2209.3 Location on Property
- 3203.1.3 Foundations and Supports
- 3203.2.2 Vessels or Equipment Other than Containers
- 3203.5.3 Securing of Vaporizers

International Fuel Gas Code (International Code Council, 2009)

- 708 Design of Liquefied Hydrogen Systems Associated with Hydrogen Vaporization Operations

NFPA 55, Compressed Gases and Cryogenic Fluids Code (National Fire Protection Association, 2010)

- 11.2.5 Liquefied Hydrogen Vaporizers

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