

mechanical exhaust ventilation system designed in accordance with Section 421.4.1.1. [F]

421.4.1.1 Ventilation alternative. When an exhaust system is used in lieu of the interlock system required by Section 421.4.1, exhaust ventilation systems shall operate continuously and shall be designed to operate at a negative pressure in relation to the surrounding area. The average velocity of ventilation at the face of the door opening with the door in the fully open position shall not be less than 60 feet per minute (0.3048 m/s) with a minimum of 45 feet per minute (0.2287 m/s) at any point in the door opening. [F]

421.4.2 Windows. Operable windows in interior walls shall not be permitted. Fixed windows shall be permitted when in accordance with Section 715. [F]

421.5 Ventilation. Cutoff rooms shall be provided with mechanical ventilation in accordance with the applicable provisions for repair garages in Chapter 5 of the *Abu Dhabi International Mechanical Code*. [F]

421.6 Gas detection system. Hydrogen cutoff rooms shall be provided with an *approved* flammable gas detection system in accordance with Sections 421.6.1 through 421.6.3. [F]

421.6.1 System design. The flammable gas detection system shall be *listed* for use with hydrogen and any other flammable gases used in the room. The gas detection system shall be designed to activate when the level of flammable gas exceeds 25 percent of the lower flammability limit (LFL) for the gas or mixtures present at their anticipated temperature and pressure. [F]

421.6.2 Operation. Activation of the gas detection system shall result in all of the following: [F]

1. Initiation of distinct audible and visual alarm signals both inside and outside of the cutoff room.
2. Activation of the mechanical ventilation system.

421.6.3 Failure of the gas detection system. Failure of the gas detection system shall result in activation of the mechanical ventilation system, cessation of hydrogen generation and the sounding of a trouble signal in an *approved* location. [F]

421.7 Explosion control. Explosion control shall be provided in accordance with Chapter 9 of the *UAE Fire & Life Safety Code of Practice* .

[F]

421.8 Standby power. Mechanical ventilation and gas detection systems shall be connected to a standby power system in accordance with Chapter 27. [F]

SECTION 422 AMBULATORY HEALTH CARE FACILITIES

422.1 General. Occupancies classified as Group B ambulatory health care facilities shall comply with the provisions of Sections 422.1 through 422.6 and other applicable provisions of this code.