



IN-HOUSE TRAINING

Hazardous Area Classification for Gas Utilities



HAC for Gas Utilities

- Learning Objectives**
1. To establish the degree and extent of a hazardous location for typical utility installations handling natural gas
 2. To identify the appropriate hazardous area classification codes, standards and recommended practices for a given situation
 3. To perform ventilation assessments for enclosed locations
 4. To properly document a hazardous area classification design

Intended Audience Engineering, Design, Construction and Maintenance Personnel involved in Gas Utility Installations and Facilities

Course Duration 1 day (8 hours)

CEUs: 0.8

Course Outline

1. Hazardous Locations
 - A. Basic Concepts
 - B. The fire triangle
 - C. Probability of a release vs. risk of ignition
 - D. Standard of care required to perform a hazardous area classification
2. Codes Standards and Recommended Practices
 - A. CEC Section 18
 - B. OH&S Requirements
 - C. API RP 500, RP 505
 - D. NFPA 497
 - E. IEC 60079-10-1
 - F. IGE/SR/16, EGE/SR/25

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3. Definitions

- A. Class, Zone, Group, Temperature code**
- B. Zone vs. Division Method of Area Classification**
- C. Normal vs. Abnormal Operations**

4. Hazardous Materials

- A. Flammable gases and liquids classifications**
- B. Highly volatile liquids (HVL's)**
- C. Flammability relationships**
- D. Density**
- E. Group classification**
- F. Auto-ignition temperature**

5. Methods of Area Classification

- A. Classification by Simple Methods**
- B. Classification by Combination of Methods**
- C. Classification based on Operating Experience**

6. Ventilation Concepts

- A. Adequate vs. Inadequate ventilation**
- B. Ventilation Assessments**
- C. HVAC design concepts**
- D. Naturally ventilated enclosed areas**
- E. Use of gas detection**
- F. Use of vapor-tight barriers**

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7. Documentation Requirements

- A. Area classification study report
- B. Calculation requirements
- C. Drawing requirements

8. Application Examples

- A. Gas Utility Regulator Station
- B. Gas Utility Gate Station






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Schedule Training

contact@engworks.ca

EngWorks

1620 49 Avenue SW
Calgary, AB, Canada

 403-287-2579

EngWorks.ca

