

AGT 1 – Confined Space Authorised Gas Tester 1

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Overview

The following programme is designed to meet the initial training and validation requirements for those intending to work as Authorised Gas Testers.

We actively work with our clients to produce tailored training courses that meet the specific needs of those active in all industries including oil & gas exploration, oil and gas transportation and storage, petrochemical, shipping, manufacturing, tank & vessel cleaning and inspection companies.

AGT Level 1 is required for those involved with performing a tests for oxygen, flammable and toxic gases up to and including working in confined spaces.

NOTE: Persons undertaking Safety Watch duties at the entrance to a confined space should also attain AGT Level 1.

Programme Format

Delegates attending this training programme are given a series of presentations and scenarios, which explain and demonstrate the safe and proper use of gas detectors. The course covers:

1. An introduction and definition of a confined spaces
2. Interpreting operational instructions
3. Legislation, Codes of Practice and Guidance Notes
4. Testing requirements for oxygen, flammable and toxic gases
5. Procedures for confined space atmosphere testing
6. Selection and use of suitable gas detectors
7. Properties of gases and vapours
8. Identify problems and limitations in their knowledge and expertise
9. Interpretation and recording of results
10. Personal protective equipment
11. Examples and experiences of good and bad practice
12. Assessment and certification

Requirements

There are no pre-requisites for attending the course; however, those attending should note the technical nature of the material means a reasonable scientific and academic ability would be advantageous.

Evaluation

Students are tested and assessed using a series of multiple-choice written tests and a multifaceted scenario, which they are required to complete. A score of 80% is required in each of the sections for a pass to be awarded.

Materials

All material will be provided although suitable PPE may be required for site specific assessments.

Details

Location

All courses may be undertaken at Scienco's offices and training facilities or at your own place of employment.

Course Length

The course including assessments normally last 2 days unless amended to suit specific needs.

Physical Demands

All those who undertake the course should be medically fit and able to participate fully. The responsibility for ensuring those who attend are fit to do so rests with the delegate and company sponsoring them.

Course Timetable:

1. Overview:

- To introduce the safe operation of portable gas detectors used by your organisation for confined space testing. Completion of the course results in the delegate being issued with a Certificate of Attendance and Authorised Gas Tester Certificate Level 1 (Confined Space)

2. Module 1 Introduction

- **Purpose of the training**
- Summary of the day ahead
- Introduction of the assessment scenario
- Composition of air and how it becomes contaminated
- Reasons for gas testing

3. Module 2

- **Overview of legislation**
- Definition of a confined space
- Introduction to air quality
- Identification of hazards associated with oxygen deficiency or enrichment, toxic and flammable gases
- Developing risk assessments to identify hazardous gases prior to entering a confined space
- Safe systems of work
- Duties of gas testers (Safety Watchers)
- Your company procedures and their interpretation
- The implications of organisational and statutory requirements
- Working within Permit to Work systems
- Raising of alarms and initiating emergency response

4. Module 3

- **The requirement to measure oxygen**
- Oxygen depletion
- Oxygen enrichment
- Alarms

5. Module 4

- **The requirement to measure flammable gases & vapours**
- Chemistry of fire
- Lower explosive limits
- Flashpoint and ignition temperatures

6. Module 5

- **Toxicity of gases, mists and fumes**
- Workplace Exposure Limits (WEL's)
- Control of Substances Hazardous to Health (COSHH)
- Hydrogen sulphide
- Carbon monoxide
- Carbon dioxide
- Hydrocarbons
- Benzene

7. **Module 6**

- **Personal protective equipment**
- Selection and use
- Examples
- Provision of PPE
- Inspection of PPE
- Maintenance and storage

8. **Module 7**

- **Properties of gases**
- Definitions & physical properties
- Density
- Neutral buoyancy effect
- Temperature effects
- Implications of the storage conditions
- Inside and outside buildings and plant
- Positioning of sensors and survey techniques

9. **Module 8**

- **Portable gas detectors**
- Selection of personal, portable and area monitors
- Sensors
 - Catalytic beads
 - Infra-red
 - Photo ionisation
 - Electrochemical
 - Colour indicator tubes
 - Adsorption tubes and badges
- Sensor selection
- Pumped and diffusive sampling
- Sample tubing selection
- Pre-start checks
- Calibration

10. **Module 9**

- **Practical on-site testing**
- Selection of the correct gas detector and setup for confined space entry checks
- To introduce the operation and maintenance of portable gas detectors
- Pre-start checks (repeated)
- Understanding gas detector calibration
- The behaviour of different flammable and toxic gases
- Range and frequency of atmosphere tests
- Understanding of safe entry concentrations, alarm levels and WEL's
- Sampling methods and how to obtain a representative sample
- Monitoring and re-tests
- Positioning of static equipment
- Interpreting and documenting of results
- Sources of errors in gas measurement and methods of minimising these

11. **Module 10**

- **Case studies**
- Examples of good and bad practice
- Video presentation

12. **Module 11**

- **Theory assessment questions**

13. **Module 12 (optional)**

- **Gas detector user training**
 - X-am 2000
 - X-am 7000
 - Accuro Pump and tubes
 - CMS
 - Multi PID
 - X-Zone
- Bump-testing and function checking
- Gas detector calibration (practical)

14. **Module 13**

- **Introduction to the practical assessment Scenario**
- Individual practical assessment