

Hydrogen Safety Training Course

H2SAFE3.1 – Outline

The Hydrogen Safety training course is designed for all individuals and teams working on any hydrogen system. Course duration is 1 day and is designed to create an impact with a message for the delegates. Hydrogen is a fuel and therefore presents danger, and this course will have practical elements which will ensure all are aware of the severity of the risks involved with Hydrogen.

During the course of the day all delegates can opt in to each conduct an **experiment to cause the explosion of a small volume of hydrogen**. This activity is fully risk assessed and all PPE will be provided on the day.

Course will cover all of the main properties and hazards relating to handling hydrogen. (See Schedule)

Certificate provided upon successful completion.

Who should attend:

- Process Engineers
- Design Engineers
- Validation Engineers
- Health and Safety Professionals
- EC&I Engineers
- Project Engineers
- Project Managers
- Commissioning Engineers and Technicians
- Test Engineers and Technicians
- Maintenance Engineers
- Other technical roles

Schedule:

9:00AM – 11:00AM

Module 1:**Hydrogen Properties**

Basic Chemical and Physical Properties
Flammable Range LEL and UEL
Low Ignition Energy
Hydrogen Embrittlement
Gas Transfer Properties (Leakage)
Risks of Working with Hydrogen

11:15AM – 12:00PM

Practical Activity:**Hydrogen Combustion Experiment**

Controlled Explosion of 10ml of Hydrogen by Applying an Ignition Source to Make it Combust (Fully Risk Assessed and all PPE Provided)

12:45PM – 1:45PM

Module 2:**ATEX Directive**

ATEX Compliance
Hazardous Zones
PED/PSSR Pressure Tests and Leak Testing
Opening Hydrogen System to Atmosphere

2:00PM – 3:00PM

Module 3:**Safe Handling of Hydrogen**

Incident Case Studies
Safe Practice Scenarios (Identify Danger, Determine Protective Measure)