

■ **Course title:**

# Introduction to HAZID Studies for Nitrogen Fertilizer Plants with Case Studies

■ **Introduction:**

Hazard Identification (HAZID) is a brainstorming workshop with a multi-disciplinary team to identify potential hazards. HAZID studies may be broad in their scope and thus have a wide applicability. HAZID typically examines all reasonably possible sources of hazard during project design, construction, installation, and decommissioning activities, and for proposed changes to existing operations.

The HAZID is one technique within a suite of hazard evaluation and risk management tools. This process is at a higher level compared to a HAZOP or Bowtie study. HAZID can be conducted at a unit or system level with little documentation other than a design concept.

This course will help you better understand the methodology and how to conduct a HAZID study effectively in the management of process safety and environmental and asset integrity scenarios. The course includes example of key hazards identified in ammonia and urea plants.

Reference Training Course: PSM11

*Duration 1 hours.*

■ **Course outline:**

## Lessons

1. When to perform a HAZID Study
2. Format of HAZID Workshop
3. Key Hazards for Ammonia and Urea plants
4. Steps in the Process
5. Risk Matrix
6. Deliverables

Author(s) / Trainer(s):



## Angus Keddie

Process Hazard Consultant

Angus Keddie has spent 35 years with industry leaders such as BP, KBR and Air Liquide. He has held high level Process Safety, Technical, Operations, Proposals and Training positions. Angus graduated with an Honours Degree in Chemical Engineering from Edinburgh University in 1986. He was subsequently awarded an MBA from Aston University in 1997. Furthermore, he was elected a Fellow of the Institute of Chemical Engineers in 2014.

Angus combines a strong technical background, proven management and facilitation credentials and robust communication skills. He has leveraged the use of these assets to achieve success in the industry posts he has held to date in his career. He has led over 100 Process Hazard Assessments, including HAZOP, SIL, LOPA, HAZID and SIMOPs for High Hazard Processing Industry Projects.

In 2011 he established AK Safety First, which subsequently became Process Safety Matters, to provide world class Process Safety facilitation and training. He has developed and presented HAZOP, HAZID and LOPA Training courses which have been delivered in person and remotely in the UK and internationally.

#### ■ Learning outcomes:

By the end of this training course you will understand:

- when and why to perform a HAZID study
- how to conduct a hazard identification (HAZID) study
- how to perform a qualitative risk assessment.

#### ■ Who will benefit:

Anyone with a basic knowledge of the risk management but is seeking to become more expert in its application. Risk engineers with HAZID experience and is intended to formalise the approach to HAZID within a project context.

The course would particularly benefit management, engineering and operations/maintenance personnel with responsibility for managing hazards and implementing/sustaining risk control measures.

#### ■ Course materials:

- Hand-out presentation slides in PDF format

#### ■ Price:

**€ 120**

#### ■ Discounts:

- 2 places – 10% discount
- 3 places – 15% discount
- 4 or more places – 20% discount.

#### ■ In-company training:

This course is also available as an in-company course (face-to-face or online) where content can be customised to meet your organisation's specific needs and delivered on a date/location that suits your requirements.

[Contact us](#) for more information.

#### ■ Training code: PSM03