

# PHA Master Class

Abu Dhabi  
Nov 25 & 26



LOPA

HAZOP

SIL

For technical safety specialists and managers of companies dealing with processes that involve hazardous chemicals. To become a leader in Process Hazard Analysis and assure safe operation.

**Your trainer:** Dr T. Koerts has 25 years experience in the hazardous chemical industry, is leading the EPSC and is well recognised for process safety training across the world

## Content Day 1:

- **Chemical Hazard Understanding:** Run Away reactions, Explosion types, Toxic release modelling
- **Legal requirements on Process hazard Analysis:** Safety Case, QRA principles, Seveso Directive
- **Risk Definition:** Acceptability criteria, Calibrated Risk Matrix, ALARP implementation

LUNCH

- **PHA methodology:** Barrier thinking & Swiss Cheese model, LOPA, Data bases for equipment failure rates
- **Workshop on the barrier model:** Consequence level and initiating frequency; Determining SIL for safety loops; Conditional modifiers & Enabling conditions
- **PHA techniques:** Applying HAZID, HAZOP & What-If; FMECA studies; BOW-TIE & Fault Tree

## Content Day 2:

- **HAZOP method:** practices in execution; HAZOP traps; Guide word selection; Software to use
- **HAZOP workshop:** P&ID review & Node selection; Execution and benchmark of your results
- **Special hazards from Chemical and Oil & Gas industries:** Corrosion types; Typical equipment failure mechanisms

LUNCH

- **HAZOP Leadership:** How to lead a HAZOP; Criteria for good HAZOP leaders;
- **HAZOP organisation and Culture:** HAZOP schedule; Action completion; Auditing and management involvement
- **PHA of typical operation units:** Reactors and Distillation; Flares & Heat exchangers; Pumps & Compressors

## Course location

**St Regis Abu Dhabi**



Assure all your Hazards are Understood and Evaluated

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Price 1700 USD