

# HAZOP (HAZard and OPerability) analysis

*The principles and the implementation*

Duration:

1 day

## Teaching methods

Presentations with illustrated practical cases  
Lunch meeting with the speaker

## Prerequisites

Equivalent profile as engineer, in technical or in scientific education

## For whom

Project Managers, Design Offices, Methods, R & D, Quality

## Lecturer/Trainer

Expert and / or specialist

## Assessment methods

Assessment sheet and self-assessment given at the end of training

## Sites

PARIS / LYON /  
MONTREAL

Intra-company sessions on request

## Contact us

For more information  
Phone : 438-558-1395  
formation@sector-group.net

## Objectives

The HAZOP analysis is an approach to improve safety and processes for an existing installation or a project by :

- Conducting the study in a working group gathering different occupations: safety, engineering, operation, maintenance, etc...
- Implementing a method of analysis related to installations with fluid circuits
- Taking into consideration the safety standards.

## Program

**General principles of HAZOP** (HAZard and OPerability studies)

- Definition, application framework, origin of the method
- Notion of risk and operability concept

### **Description of the method**

- Definition of the system to be studied
- Familiarization with the system
- Specific elements of the method
- Presentation of HAZOP file
- Analysis of the failure and implementation of the recommendations
- When can we use the HAZOP analysis?
- Application of the method on a study case

### **Development**

- Preparation of the study
- Establishment and management of the working group
- Monitoring the recommendations of the working group

### **Impacts of the HAZOP analysis**

- Immediate impacts:
  - Improved safety of the plants
  - Compliance with safety standards
  - Improvement the safety of the plant, capitalization of the feedbacks
- Subsequent impacts :
  - Reliability-centered maintenance (RCM)
  - Predictive analysis of incidents/accidents

### **Importance of the HAZOP analysis in a RAMS approach**

- Functional analysis
- Preliminary Hazard Analysis
- Similar methods to HAZOP analysis
- Root-cause analysis, state graph
- Limits of the HAZOP analysis

### **Deepening of the knowledge and putting into practical**

- Case study