

## HAZOP - Hazard and Operability Study

**Goal:** HAZOP (Hazard and Operability Study) is one of the most popular detailed risk analysis methods in process industry. This course will show you how to prepare, execute, implement and report a HAZOP. The method will be described with examples and brainstorming techniques.

### 1. Overview: HAZOP Study

- Basic terms and concepts, Hazop Background, Objectives.

### 2. Features of HAZOP

- Purpose, How and Why is used.
- Hazop steps

### 3. Documents needed for HAZOP

- Preliminary HAZOP documents. Detailed HAZOP documents.

### 4. Study Procedure and Guidelines

- Guide Words, guide word lists
- Analysis target and scope: Process line examination, flowchart. Division into sections, Hazop nodes..
- How to using Hazop analysis forms effectively
- Preparation of study report, essentials.
- Exercises.

### 5. SIL and LOPA

- SIL classification for risks
- LOPA analysis for residual risks

### 6. How to Manage HAZOP

- Organization for a Hazop study. Role of Hazop Leader / secretary
- Basic rules for a successful Hazop session
- Questioning techniques.
- How to handle suggested process improvements
- Case study.

### 7. Discussion Session

- Course key points. Questions.