

## ▶▶ Training – Process Safety and SIS Design Lifecycle

- 0830 - 0845 1.1 Course introduction and introduction of team members
- 0845 – 0900 1.2 Risk concepts
- 0900 – 0915 1.3 History of safety standards with instrumented means
- 0915 – 0930 1.4 Introduction to 61508
- 0930 – 0945 1.5 Introduction to 61511
- 0945 – 1000 1.6 Application of 61508 / 61511 for process industries
- 1000 – 1015 1.7 Question and Answers

### 1015 – 1030 TEA BREAK

- 1030 – 1115 2.1 Safety Life Cycle: IEC 61511
- 1115 – 1145 2.2 Risk reduction / Tolerable risk criteria
- 1145 – 1215 2.3 Instrumented method for risk reduction
- 1215 – 1245 2.4 Question and Answers

### 1245 – 1345 LUNCH

- 1345 – 1400 3.1 Target SIL assessment - Risk Matrix
- 1400 – 1415 3.2 Examples
- 1415 – 1430 3.3 Target SIL assessment - Risk Graph
- 1430 – 1445 3.4 Examples
- 1445 – 1515 3.5 Question and Answers

### 1515 – 1530 TEA BREAK

- 1530 – 1600 4.1 Analysis using Fault Tree
- 1600 – 1630 4.2 Analysis using Event Tree
- 1630 – 1700 4.3 Question and Answers

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## Day – 2

- 0830 - 0900 5.1 LOPA (Layer Of Protection Analysis)
- 0900 – 0930 5.2 Examples
- 0930 – 1000 5.3 Question and Answers

## 1000 – 1015 TEA BREAK

- 1015 – 1030 6.1 Safety Instrumented System Design &SIL
- 1030 – 1100 6.2 Reliability Theory
- 1100 – 1130 6.3 SIL: Probability of Failure on Demand requirements
- 1130 – 1200 6.4 SIL: Hardware Fault Tolerance Requirements
- 1200 - 1230 6.5 Question and Answers

## 1245 – 1345 LUNCH BREAK

- 1345 – 1400 7.1 Failure rate data source
- 1400 – 1415 7.2 System Reliability analysis methods (RBD, FTA, Markov)
- 1415 – 1445 7.3 PFD: Simplified Equations
- 1445 - 1515 7.4 Question and Answers

## 1515 – 1530 TEA BREAK

- 1530 – 1600 8.1 SIL Verification: Example
- 1600 – 1630 8.2 Contribution from the team during SIL workshop
- 1630 – 1700 8.3 Questions and Answers