

PE22: Integrated Process Safety Review, HAZOP and SIL Determination

Over this 3-day course, participants will experience the Safety Lifecycle, starting from the conceptual phase of a project right through to operations. This integrated course starts with introduction to various Process Safety Reviews, followed by providing knowledge and skills to the participants, to be able to effectively prepare and participate in HAZOP and SIL determination methodologies. This course is not just for the experts but is a valuable overview for anyone involved in process safety, hazard prevention and risk management at any level.

Course Benefits:

- Participants will develop a basic understanding of various Process Safety Reviews and safety life cycle.
- The course will focus on the HAZOP and SIL Determination.
- The course is highly interactive, will include videos, experiential case studies and comprehensive course material.

Target Group:

- Supervisors, managers and engineers responsible for PHA / SIL studies
- PHA / HAZOP SIL Team Members & scribes
- Health & Safety / Process Safety professionals
- Process Safety Management (PSM) / Loss Management specialists
- Risk Assessment specialists
- Project managers who need to understand the concepts and principles of PHA/SIL
- Engineers involved in any aspect of the Safety Lifecycle

Date: 2 Days Course - Check upcoming dates in www.chemengedu.com

Time: 9:00-17:00

Price & Promotions: See rate and promotions in www.chemengedu.com

Venue: Check venue in www.chemengedu.com

Registration: By Training Registration Page in www.chemengedu.com or contact Khun Piyarat 089 118 6531, chemengedu.training@gmail.com

Agenda & Course Outline:

Day 01: Process Safety Reviews

- Introduction to Process Safety
- Safety Life Cycle
- Occupational Safety vs Process Safety
- Risk Assessment Concepts
- PHA Methods
 - Preliminary Hazards Analysis
 - Checklist Analysis
 - What-If? Analysis
 - Checklist / What-If? Analysis
 - FMEA (Failure Modes and Effects Analysis)
 - HAZOP (Hazard and Operability Study)
- SIL Determination
- Sil Verification / Validation
- Elements of PSM

Day 02: Hazard and Operability (HAZOP) studies

- Introduction to and scope of HAZOP Reviews
- What, Why, Who, When, How, Where of HAZOP Review
- Limitations of HAZOP Review
- HAZOP Methodology
- Team meetings and team member responsibilities
- HAZOP Worksheets
- Hazard recording and reporting
- HAZOP Review follow up and close-out
- Case Study: Mock HAZOP
- Evaluation

Day 03: SIL Determination

- Introduction to Functional Safety
- What is SIL/ SIS?
- Codes & Standards
- Principles of ALARP and Risk assessment.
- Principles of Risk Graph and LOPA.
- Tolerable risk targets and how to set them
- How to set up and record SIL Determination studies.
- Case Study -SIL Determination Study
- Awareness to SIL Verification/ validation Studies

Certificate

All participants will be given 'Participation Certificate' for attending Fundamentals HAZOP and Process Design Safety Review with Checklists and WorkshopCourse from ChemEngEdu.

Your Instructor:

Any two of the following faculty will be conducting the course;

B V Ramabrahmam M.Tech

BVR has Post graduate degree in Chemical Engineering from one of India's premier engineering college having more than three decades of experience. BVR, as past Chief Scientist and Head of Cell for Industrial Safety and Risk analysis (CISRA) of Chemical Engineering Area of CSIR-CLRI, Chennai. BVR an active consultant in chemical hazard and risk analysis. He has over 50 research papers in national and international journals. He has four patents and is author of two books.

Cheluva Kumar B.Tech.,

Cheluva Kumar has bachelor's degree in Chemical Engineering from India's reputed institute, NITK Surathkal and has over 30+ years of experience in Process Safety Management, Process Engineering, Plant Operations, Technical Services and Capital Projects execution. Kumar's International assignments include working in Saudi Arabia for more than a decade and extensively travelled to Europe, USA and South East Asia. Kumar 's worked for Owner operator companies in India and abroad including National Fertilizers, Nagarjuna Fertilizers, SABIC and, Shell Technology India.

A. Raja Shekhar M.Tech.,

Raja Shekhar has master's degree in Chemical Plant Design and has over 30+ years of experience in Process Engineering, Plant Operations, Technical Services and Capital Projects execution. Raja's International assignments include working in USA, Oman, and Brunei. Raja's worked for EPC companies in India and abroad including Punj Lloyd, Shell Technology India.

Sukumaran M

Sukumaran is an Electrical Engineering graduate from one of India's premier engineering college having more than three decades of industry experience. Sukumaran worked for various corporates in India and abroad such as Keltron Controls, Saudi Arabian Kent, P.T. Polysindo Eka Perkasa, J. Ray Mc Dermott, Valdel Engineers & Constructors and Pepperl & Fuchs. Sukumarans experience include Engineering, Project Management and Maintenance of Instrumentation, Automation and Safety Systems for Power Plants, Petro Chemical plants and Oil & Gas industries. Sukumaran is a Senior Member & Past President, International Society of Automation (ISA), Bangalore.