



Chilworth

Technology

Formerly Chilworth Safety & Risk Mgmt. P. Ltd.

FLASH FIRE & EXPLOSION HAZARDS IN HANDLING OF FLAMMABLE GASES, VAPOURS AND POWDERS



WORKSHOP

TIME: 9:00 am to 5:00 pm

COST: Rs. 8500/- per delegate plus services tax as applicable

[Fee covers Course Material, Lunch, Tea/Coffee on training day]

INTRODUCTION

Although the explosion hazards associated with flammable (solvent) vapours, dusts and gases are well known, explosions continue to happen in all branches of industry. Anyone handling flammable gases, liquids or solids has to be aware of the hazards. This course will present the ways to identify the hazards, prevent flash-fires and explosions and mitigate their consequences.

The aim of this course is to enable the identification and understanding of the flash-fire and explosion hazards associated with the use of flammable liquids, gases and solids on plant, in order to be able to specify appropriate measures to reduce the risk of a gas or vapour or dust fire and explosion occurring.

The course is suitable for a mixed discipline of staff that requires essential knowledge of the hazards involved in handling flammable liquids, dusts and gases. This course is particularly relevant to staff from the chemical and processing industries including bulk and fine chemicals, pharmaceuticals, food and drink, metal refining and manufacture, soaps & detergents, plastics and rubber, agrochemicals, dyes, paints and inks.

SPECIAL FEATURES

- Classroom workshop/examples to show practical application
- Use of case histories to illustrate past mistakes
- Practical Demonstrations including a small-scale dust explosion and static electricity measurements
- Video presentations



CONTENTS

➤ Introduction to gas and vapour explosions

- What is a gas/vapour explosion?
- What is a dust explosion?
- Frequency of incidents
- Deflagrations and detonations
- Flammability of gases & vapours

➤ Understanding flammability characteristics

- Fire triangle and Explosion pentagon
- Conditions required for gases and vapours explosions
- Conditions required for dust explosions
 - Flammability of dusts
 - Testing strategy
 - Interpretation and application of test results
- Flammability assessment
 - Ignition sensitivity
 - Factors affecting flammability

➤ Demonstration of a small-scale dust explosion

➤ Prevention of flash-fires and explosions in plant

- Inherent safety
- Control of gas/vapour concentrations
- Inerting
- Assessment and Elimination of ignition sources including static electricity
- Hazardous area classification

➤ Methods of explosion protection

- Containment
- Explosion venting
- Explosion suppression
- Isolation

➤ Case Histories and Movie

WHO WILL BENEFIT:

- SENIOR MANAGEMENT
- REGULATORY COMPLIANCE STAFF
- HSE PROFESSIONALS
- OPERATING PERSONNEL

For registration and directions, please call **Neha** at 022-66942350/ 51/ 098670 35703 or **Shweta** at 011-26136979/ 098717 72345 or **Amudha** at 044-42125445/6/7/ 09940632281

You can also email your nominations at info@chilworth.co.in

Payment mode: DD/Cheque in favor of Chilworth Technology Pvt. Ltd., New Delhi.