

SAFETY IN GAS PLANTS AND FACILITIES

HSE033

COURSE DESCRIPTION

This course is designed for participants in control of staff, and also responsible for Safety. Since they are responsible then it is essential to grasp, control and appreciate the issues of safety. It is important to realize what can go wrong and the measures that are in place to have safety not just as slogan but an active ingredient of day to day operations. Essentially to be able not only to see but to understand what the requirements are for Industrial Safety and by such observations actively assist in the controlling of hazards within the plant. This course covers topics related to safety in gas plants and facilities such as: Process safety management, inherent safety & risk evaluation, maintenance and inspections, tank farm safety, incident & emergency response.

COURSE GOAL

To enhance the participants' knowledge, skills, and abilities necessary not only to see but to understand what the requirements are for safety and actively assist in the controlling of hazards within the plant.

COURSE OBJECTIVES

By the end of this course the participant will be able to:

- Review Process Safety Management.
- Appraise safe maintenance.
- Apply safe work methods.
- Evaluate fire safety and fire protection.
- Judge how to react in case of emergencies.

WHO CAN BENEFIT

- Professionals in the Oil & Gas Industry who have responsibilities for health & safety.
- Shift managers.
- Production engineers.
- Process engineers.
- Personnel involved in maintenance.
- Anyone that requires process/industrial safety as part of their core competencies.

COURSE DURATION

5 working Days

COURSE OUTLINE

1. Process Safety Management (PSM)

- Introduction.
- OHSAS 18001, ISO 45001, & PSM.
- Background for PSM.
- Piper Alpha.
- BP Texas City Refinery.
- Process safety information.
- Hazards of chemicals.
- Hazards of associated products.
- Management of contractors.

2. Risk Evaluation and Inherent Safer Design

- Risk assessments.
- Inherent safer design.
- Bayer crop science pesticide waste tank explosion.
- Societal risk.
- Consequence modelling.
- Land use planning.

3. Process Safety

- Management of change.
- Permit-to-work system.
- Shift work.
- Maintenance strategies.
- Confined spaces.
- Tank bottom plates repair.
- Inspection.

4. Process Control

- Safe operating envelop.
- Standard operating procedures.
- Emergency shutdown.
- Furnace start up and shutdown.
- Furnace control.

- Firing conditions.
- Boiler controls.
- Storage depots – Types of tanks & tank bunds, gas storage.

5. Incident and Emergency Response

- Fire.
- Explosion and explosion risk.
- Emergency response – who is in control?
- On site emergency plans.
- Off-site emergency plans.
- Emergency Control Centre.

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