Process Technology

Course Description

Course Overview
The goal of this course is to develop a basic understanding of the procedural application required for material hazards, process design and equipment design safety. Participants will identify PSM critical equipment and apply solutions in accordance to procedures. Participants will collaborate in groups of three to analyze scenarios using incident videos and case studies. They will use critical thinking skills to predict potential problems.

Learning Objectives
In order to accelerate skill development, this course features a problem-based learning approach that provides a collaborative job-focused experience. Participants will see the importance of process technology information; identify and apply procedural requirements to potential job-related safety hazards; and compare requirements to actual documented hazards. They will collaboratively build a personal job-aid to identify PSM critical equipment; identify, collect, organize and characterize hazardous materials, as well as process and equipment design information. They will also transfer diagnostic strategies to job-related decisions and demonstrate understanding of the process technology information to begin Process Hazard Analysis (PHA).

Audience
The Process Technology course is designed for projects, operations and maintenance managers; projects, technical, operations and maintenance engineers; and process technology element leaders and team members. The content is highly technical, requiring the facilitator and participants to be familiar with chemical, temperature and supply-chain processes. They should also have prior knowledge of hazard awareness, process design and technical equipment design.

Length:
2-day course

Pre-requisites:
• PSM 101: PSM Overview
• Prior exposure to operations, maintenance, projects

Results and Path Forward
After completing this course, participants should compile a list of action items based on their learning to apply back on the job. This starts with writing new or upgrading existing PT procedures. To build competency at the individual level, the participant should identify a coach, apply the updated PT procedure to select unit operations in their plants to collate information, establish PSM critical in those operations, get assessed on the competency requirements, and apply PT requirements to other unit operations.

It is recommended that participants go through an e-learning refresher course once a year and instructor-led refresher training once every three years.

Module 1: Hazards of Materials
This module helps participants recognize and describe the hazardous conditions applicable to problem-based incidents.

Module 2: Process Design Basis
This module reviews the design basis package requirements and helps participants understand the crisis relevant elements.

Module 3: PSM Critical Equipment
Participants will define and practice identifying PSM Critical Equipment.

Module 4: Equipment Design Basis
Participants will review the applicable codes and standards that apply to equipment and discover why they need to manage equipment design basis records.

Based on our experience, we recommend that companies do the following on an organizational level:

- Refresher e-learning
  - Identify, collate and analyze PT for one Operation
  - Identify PSM Critical Equipment for that operation
  - Review adequacy for PHA & carry out PHA

- PT Instructor Led Training
  - Establish and Track KPIs for PT
  - Apply to all operations
  - Evaluate competencies

General Enquiry:
Call 1-800-828-8190 to speak with an account representative.

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