PD702
Process Safety and Risk Management

Day One

- General
  - Introductions
  - Rules of Conduct
  - Teaching times—start/stop
  - Description of the work book and how it is to be used

- Background and History (demonstrating need for) PSM
  - Discussion of several significant PSM related accidents
  - Role that a Mechanical Engineer (or other engineer) could/should have played in accident prevention
    - Break-out/Workshop

- OSHA’s 1910.119 Regulatory requirements
  - OSHA’s 14 Key PSM Elements
    - Break-out/Workshop

- Open Discussion and Clarification

Day Two

- EPA’s RMP (Process Safety) Regulation
  - Comparison of EPA’s and OSHA’s PSM regulatory requirements

- CCPS’s 20 Element Risk Based Process Safety Approach
  - Comparison of CCPS 20 Element approach to OSHA 14 Key PSM Elements
    - Discussion as to:
      - Relationship with regulations
      - “Real World” applicability
      - Adaptability to various businesses (depending on class make-up and experiences)

- Benefits of Process Safety Management Systems
  - Break-out/Workshop

- Risk
  - Understanding Risk (what it is and is not)
  - Characterizing Risk (display and communication means)
  - Managing Risk

- Open Discussion and Clarification

Day Three

- Tools and “how-to’s” for Implementing a Good PSM Program
– PHA (and PHA Revalidation) Methodologies
  ▪ Checklists
  ▪ What if?
  ▪ What if?/Checklist
  ▪ Fault Tree Analysis
  ▪ HAZOP
– Siting: Protection of people in buildings
– “Other” Considerations
  ▪ Human Factors
  ▪ Incident Investigations
  ▪ “Probability/Likelihood” of occurrence
  ▪ Security Risks and how they differ from Process Safety Risk Management

• The Mechanical Engineer’s (and other engineer’s) Process Safety and Risk Management roles at different levels in the organization and for different functions/responsibilities
  – Breakout/Workshop & discussion
• Building a PSM Plan for your Company
  – Defining and documenting risk tolerance
  – Auditing PSM programs
• Resources available
• Open Discussion
• Dismissal