



MU103: Safe Standard Isolation Procedures for Plant Systems & Equipment

Training Description:

The success of every company depends of each employee's understanding of the key business components. Employee training and development will unlock the companies' profitability and reliability. When People, Processes and Technology work together as a Team Developing Practical Solutions, Companies can maximize Profitability and assets in a Sustainable Manner. Training and development is an investment in Future Success— give yourself and your employees the Keys to Success.

It is strategically important that your operations team understands the Fundamentals of Process Unit Operations concepts. This is the different between being in the best quartile of operational ability and being in the last quartile. There is vast different in the operational ability of operating companies and most benchmarking studies have confirmed this gap in operational abilities. Whether you have a team of new or seasoned employees, an introduction or review of these concepts is very beneficial in closing the gap if you are not in the best quartile, or maintaining a leadership position. Most studies show that a continuous reinforcement of best practice in operation principles is the most effective way to obtain the desired results.

In this course, you will learn a lot of Knowledge and gain more Information to enhance your Skill such as Safe Commissioning and Utilization of Process, Safe isolation of System & Equipment. Also, how to take a decision during critical situation and Problem solving to maximize the Plant Profits and minimize the Losses. Many aspects of operations can be improved including, product recoveries and energy utilization, and safety. This cannot be achieved without first an understating of basic fundamental of Operation.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Develop key Concepts and Techniques to Pre-commission, Commission, operate and troubleshoot key fundamental unit operation systems. These key concepts can be utilized to make operating decisions that can improve your unit's performance
- ✓ Understand many aspects of operations can be improved including, product recoveries, purities and energy utilization
- ✓ Understand principles need to be in advance of operating and troubleshooting a process unit operation for the operator or problem solving to be effective
- ✓ Focus on the core building blocks of the process unit equipment. This program will emphasize process unit equipment fundamentals, safe utilization of these fundamentals by operations and maintenance personnel, equipment troubleshooting techniques
- ✓ Apply Safe Commissioning & Utilization of Process Safe Isolation of System & Equipment

Training Designed for:

This course is intended for those who are making day to day decisions regarding, commissioning, start up and normal operations of Isolation Processing plants such as Operations Supervisors, Engineers, Plants Operators and Process Support Engineers.

Training Requirement:

“Hand’s on practical sessions, equipment and software will be applied during the course if required and as per the client’s request.”

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client’s learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction
- ❖ **Module (01): Introduction & Overview**
 - Principles of Safe Standard Isolation (SSI)
 - Basic Isolation Procedures
 - Avoidance of Work Injuries
 - Identifying Energy & Hazards Sources
 - Identify all Isolation Points
 - Locking out, Tagging and Guarding
 - Personal Danger Tags
 - Shutting Down of Equipments
 - Responsibility of Operation
 - Responsibility of Maintenance
- ❖ **Module (02): Preparation for Isolation**
 - Co-ordination
 - Planning (Plan to work)
 - Hazard Assessment
 - Types / Categories of Work
 - Cross Reference
 - Life / Validity of Permits
 - Isolation Process
 - Precautions
 - Signatures (issue, release & approve)

DAY TWO:

- ❖ **Module (03): Process of Isolation**
 - Display of Permits
 - Revalidation
 - Suspension
 - Shift Hand—Over
 - Action in an Emergency
 - Monitoring Process
 - Case Study on Isolation Systems
 - Case Study on Isolation Equipment

❖ **Module (04): Safe Isolation Practices & Tips**

- Safe Work Instructions (SWI)
- Requirements for Isolation of Machinery
- Importers of Information of Machinery/Equipment
- SWI for Isolation of Machinery / Equipment
- Important Isolation Tips

DAY THREE:

❖ **Module (05): Isolation of Machinery / Equipment**

- Using the Hierarchy of Control
- Identification and Isolation of Energy Sources
- Portable Machinery / Equipment
- Multiple Parties working on Machinery/ Equipment
- Procedures for Isolation of Machinery/ Equipment
- Flow Chart for Isolation of Machinery/Equipment

❖ **Module (06): Completion of Work**

- Rerun of Permit
- Site Inspection
- Removal of Isolation Tags or Devices
- Cancellation of Overrides
- Return to Service after Test Run
- Logs / Records
- Important Isolation Tips

DAY FOUR:

❖ **Module (07): Applications of Safe Standard Isolation**

- Boiler and it's Auxiliaries System
- Steam System
- Turbine & it's Accessories
- Tanks / Vessels
- Piping (Pressure, Flow and Temperature Limits)
- Heat Exchangers
- Electrical Systems (Switchgears / MCC)
- Relief Valves and Flare Systems
- Drains, Vents and Blow-down
- Black out Restoration of the Plant Systems

DAY FIVE:

❖ **Module (08): How to prevent and minimize Accidents?**

- Keeping Safety Costs Down
- Effective Meeting Techniques
- How to Prevent Accidents
- Unsafe Conditions - Mechanical /Electrical Failures
- Your Role in Job Safety
- Human Errors during Isolation

- Improving / Enhancement your Isolation Skill
- Controlling / Managing Human Errors
- ❖ Course Conclusion
- ❖ POST-ASSESSMENT and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

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