

GAS PROCESSING OPERATIONS

ADVANCED

PRE005

COURSE DESCRIPTION

The Advanced Gas Processing Operations course delves deeper into the complexities of gas engineering technology. This course provides advanced insights and practical applications in gas plant operations, addressing challenges encountered in handling diverse gas compositions and optimizing plant performance. Emphasizing advanced process control, troubleshooting techniques, and emerging technologies, participants will acquire the expertise needed to tackle complex issues in gas processing operations effectively.

COURSE GOAL

To equip participants with advanced knowledge, skills, and strategies essential for addressing complex challenges in gas compression, dehydration, acid gas removal, tailgas cleanup, sulfur recovery, cryogenic extraction of natural gas liquids (NGL), LNG production, storage, and transportation.

COURSE OBJECTIVES

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

- Utilize advanced process control techniques to optimize gas processing operations.
- Implement troubleshooting strategies for resolving complex issues in gas plant operations.
- Evaluate and integrate emerging technologies for enhancing efficiency and sustainability in gas processing.
- Analyze and mitigate risks associated with advanced gas processing operations.
- Collaborate effectively with multidisciplinary teams to address complex challenges in gas processing.

WHO SHOULD ATTEND

- Experienced gas processing engineers.
- Process optimization specialists.
- Plant managers and supervisors overseeing advanced gas processing facilities.

COURSE DURATION

5 Working Days

COURSE OUTLINES

1. Advanced Gas Processing Fundamentals

- Advanced principles of gas compression, dehydration, acid gas removal, and tailgas cleanup.
- Complexities in handling diverse gas compositions and varying operating conditions.

2. Advanced Process Control Strategies

- Model-based control techniques for optimizing gas plant operations.
- Advanced control algorithms for dynamic process optimization.
- Real-time optimization strategies for maximizing plant performance.

3. Troubleshooting Techniques

- Root cause analysis methodologies for diagnosing complex issues in gas processing.
- Advanced troubleshooting strategies for addressing process inefficiencies and equipment failures.
- Case studies and practical exercises on troubleshooting real-world challenges.

4. Integration of Emerging Technologies

- Assessment of innovative technologies for improving efficiency and sustainability in gas processing.
- Integration of automation, data analytics, and artificial intelligence in gas plant operations.
- Evaluation of advanced materials and equipment for enhancing reliability and performance.

5. Risk Management in Advanced Gas Processing

- Identification and assessment of risks associated with advanced gas processing operations.
- Implementation of proactive measures for mitigating operational risks and ensuring safety.
- Development of contingency plans for managing emergencies and unforeseen events.

6. Collaboration and Communication Skills

- Effective communication strategies for collaborating with multidisciplinary teams.
- Leadership skills for guiding teams through complex gas processing projects.
- Stakeholder engagement and negotiation techniques for achieving project objectives.