



LNG Production Fundamentals

Simtech Oil & Gas Pty. Ltd.



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LNG Production Fundamentals Training Course

Delivery Method: -	Instruction with Presentation (Slide and Model)
Location/Medium: -	Webinar
Course Title: -	LNG Production Fundamentals
Language: -	English
Duration: -	1 day (9:00 AM – 5:00 PM)
Certificate: -	Course attendance certificate, stating the core learning objective of training, issued upon completion
Prerequisites: -	Basic knowledge of gas processing, Heat & Mass Transfer, Fluid Mechanics and unit operations, along with some understanding of Thermodynamics and phase equilibria is assumed, however, no previous experience of LNG is required.
Instructor: -	Simtech Oil & Gas appointed Instructor
Objectives: -	<p>The LNG Production Fundamentals interactive training course is intended to introduce the fundamental concepts of LNG Production. The objective of the LNG production training course is to give the participant's the possibility to understand Basic Concept of Gas Transport, Primary Economics of LNG Production, a typical LNG production facility, Different Liquefaction Processes covering process, automation, safety, and Facility.</p>

The key learning objectives of the course are;

- What is LNG, why it is produced?
- Basic LNG Economics
- Understand the overall process of turning natural gas into LNG
- The basics of natural gas conditioning and liquefaction
- Learn the concept of Integrated control in LNG production
- Learn the [C3MR Liquefaction Process](#) in details
- Recognize how safety is designed and implemented to have safe production
- Learn about different Liquefaction processes
- Fundamentals of Refrigeration Cycles
- Commissioning of LNG Plant (Main Process Area's only)
- Learn about key gas processing equipment, like compressor, compressor control, heat exchanger etc.

Who Should Attend?

The course is designed to gain the basic knowledge of LNG Production. This course will certainly help in developing Process, Control, Safety, and Facility knowledge to build the concrete foundation for their chosen domains for

- Engineers (Process/Facility, Petroleum, Automation, Maintenance)
- Designers
- Operations Personnel
- Field Supervisors
- Project Managers
- along with the commercial people involved in LNG processing and contracting

basically, all those involved with the selection, designing, installation, evaluation, or operation & management of natural gas processing and LNG production facilities. In fact, anyone interested in a solid technical understanding of the principles of a LNG plant.

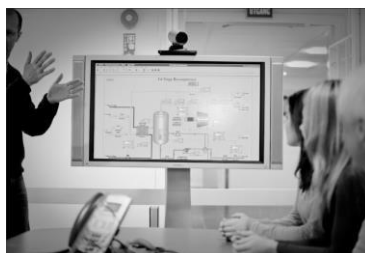
The day will: -

be divided into five sessions, timings are approximate, due to the nature of the dynamic simulator trainees may work at different paces, and this will be allowed for throughout the training course.

- 09:00 - 10:15 session 1**
10:15-10:30 Tea break
- 10:30 – 12:00 session 2**
12:00-01:00 Lunch
- 01:00 - 14:15 session 3**
14:15-14:30 break
- 14:30 - 15:30 session 4**
15:30-15:45 break
- 15:45 - 17:00 session 5**

No session will run longer than 75 minutes without a break.

All the sessions are interactive and trainee participation will be actively encouraged.



Day Plan

Session 1

Overview of course & Basics of LNG

- Introduction of Course Participants
- Overview of Course
- Typical Composition of FEED gas, Condensate, NGL, LNG
- Advantages of LNG
- LNG Economics

Session 2

Brief of LNG Plant Topography & Basic of ICSS

- Typical LNG facilities
- Bird View of LNG Process Area
- Basics of Integrated Control & Safety System

Session 3

Liquefaction Processes

- Basics of Refrigeration
- Liquefaction from nutshell
- Different Liquefaction Processes
- Comparison between Liquefaction processes

Session 4

Details Discussion of LNG Process Area

- Offshore Processing of Gas
- Details of Process concept
- Control philosophy
- Unit safety
- Operation and Asset safety

Session 5

LNG Plant Commissioning Sequence and Course Conclusion

- Sequence of Plant Commissioning
- Sequential commissioning Main utilities and Process Area ([C3MR as a Liquefaction Process](#))
- Course Conclusion & Way Forward

