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PETEX™
Liquefied Natural Gas Course
➤ LNG: Basics of Liquefied Natural Gas

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July 2014
LNG: Basics of Liquefied Natural Gas

2.2 CEUs

Provides comprehensive instruction about all facets of the liquefied natural gas (LNG) industry. The focus of this course is to present a thorough understanding of LNG liquefaction and regasification facility operations from the process side and the reasons for the rapid expansion and evolution of the industry. This course also addresses the three major building links of the LNG chain: the liquefaction plant, transport ships, and the receiving terminal. Includes overviews of the major equipment specific to the LNG industry and the supporting plant operations such as pretreatment, natural gas liquids (NGL) recovery, and nitrogen rejection. Additionally, safety, security, and environmental issues related to the LNG industry and the special features associated with offshore designs are covered. Participants receive handouts and a PETEX book—LNG: Basics of Liquefied Natural Gas.

Length: 3 days

Course Content

Participants receive instruction in

- Overview of the LNG industry
  - History
  - Baseload LNG plants
  - Developing an LNG project
- Baseload liquefaction plant
  - Liquefaction technologies
  - Trends in LNG train capacity
  - Strategy for grass-roots plant
- Receiving terminal
  - Marine facilities
  - Storage facilities
  - Process facilities
- LNG shipping industry
  - LNG fleet
  - Types of LNG ships
  - Reducing greenhouse gas emissions
- Major equipment in LNG industry
  - Cryogenic exchangers
  - Compressors and drivers
  - LNG pumps and expanders
  - Loading arms
  - LNG tanks

Recommended For

Managers new to the LNG industry; operating supervisors and engineers with suitable technical background; project managers.

LNG: Basics of Liquefied Natural Gas, cont.

- Supporting functional units in LNG plants
  - Gas pretreatment
  - NGL recovery
  - Nitrogen rejection unit
  - Helium recovery
- Safety, security, and environmental issues
  - Safety design of LNG facilities
  - Code and regulation
  - Security issues for the LNG industry
  - Environmental issues
- Offshore LNG
  - Receiving terminal
  - LNG production
  - LNG transfer
- Special topics
  - Pressurized LNG
  - Hydrate and CNG
  - Risk-based analysis for an LNG project

FULL-COLOR BOOK!

LNG: Basics of Liquefied Natural Gas

Written by Dr. Stanley Huang, Dr. Chen-Hwa Chiu, and Dr. Doug Elliot

Stranded natural gas converted into liquefied natural gas (LNG), transported and regasified, is playing a more important role in the global energy mix. This full-color book covers the entire scope of the industry including the liquefaction process, storage, transportation, regasification, and the major equipment used in the manufacture of LNG. Having worked in the LNG industry for many years, Dr. Stanley Huang and Dr. Chen-Hwa Chiu of Chevron Energy Technology and Dr. Doug Elliot of Bechtel Corporation contributed both technical and hands-on experience in writing this book to bridge the gap between public perceptions and industrial realities. Full-color illustrations, a glossary, and an extensive index enhance the reader's learning experience. 2007, 160 pp.

For a copy of the table of contents, please see www.utexas.edu/ce/petex/aids/pubs/lng-basics/

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