

# NHTU & CRU

Naphta Hydrotreating Unit & Catalytic Reforming Unit

## Z244e – Web-based training (External version)

### Course duration

1.5 hours, depending on personnel knowledge

### Course type

This is a web-based training course. The course includes self-study material and self-assessment questions. The language of the course is English.

### Course goal

The goal of this course is to enable students to develop an understanding of the role of the NHTU & CRU in the overall refinery configuration, its feed, intermediate and product streams and its key unit operations:

- NHTU Feed System
- NHTU Makeup Gas Compression
- NHTU Heater
- NHTU Reactor
- NHTU Separation
- NHTU Recycle Gas Compression
- NHTU Stripping
- CRU Heaters
- CRU Reactors
- CRU Regenerator
- CRU Separation
- CRU Recycle Gas & Net Gas Compression
- CRU Stabilization (& Reformate Splitting)

### Student profile

- Sales/Service engineers
- Product engineers and
- All interested employees inside ABB

### Course objectives

Upon completion of this course, students will be able to:

- Describe the process flow
- Name the principal items of equipment
- Describe their function
- Understand their principles of operation
- Recognize their internal components

### Additionally, students should be able to demonstrate an awareness of:

- Important process variables and how they're controlled
- Major operating constraints
- Typical operating problems

### Course Modules

This course has five modules. Module 01 provides an overview of the NHTU & CRU, and Modules 01 - 05 describe each of the unit operations that make up the NHTU & CRU:

- Module 01 – NHTU Feed & Makeup Gas
- Module 02 – NHTU Heater & Reactor
- Module 03 – NHTU Separation & Compression
- Module 04 – CRU Heaters, Reactors & Regenerator
- Module 05 – CRU Separator, Compressors & Stabilizer

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### BU Measurement & Analytics

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