

Tunable Diode Laser Analyzer LS4000

Analytical Measurement

Z238e – Web-based training (External version)

Course duration

1.0 hour, 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 designed to give a complete understanding of the Tunable Diode Laser Analyzer LS4000.

The training covers the following topics:

- Technical principles
- Product portfolio & technology
- Applications

Student profile

All ABB stakeholders (customers, universities, partners, ...)

Course objectives

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

- Recognize the need for gas analysis in the process industry
- Understand the measurement principles of absorption spectroscopy
- Illustrate how Tunable Diode Laser Absorption Spectroscopy (TDLAS) works
- Describe differences between laser spectroscopy and other absorption techniques
- Differentiate between the different designs of laser gas analyzers
- Outline ABB's product portfolio of laser gas analyzers and describe the differences
- Recognize the parts which an in situ cross duct laser analyzer is made of and describe the function of each component
- Explain available communication interfaces
- Identify process parameters which may influence the feasibility of the measurement and how the instrument handles them
- List all information which is necessary for product configuration
- Classify the main industries for which ABB's in situ TDL analyzers are made
- Identify the key applications for in situ TDL analyzers