Blue Hydrogen Manufacture - Overview

Flow measurement
Z429e – Web-based training

Course duration
20 minutes, depending on personnel knowledge

Course type
This is a web-based training course. The course includes self-study material. The language of the course is English.

Course goal
This module provides an overview of blue hydrogen manufacture, its associated safety hazards and the protection measures that are required to prevent injuries and occupational health issues.

The training covers the following topics:

- Design considerations necessary to transition from grey hydrogen production (high carbon dioxide emissions) to blue hydrogen (very low carbon dioxide emissions).
- Unit operations that make up a blue hydrogen plant: pretreatment, steam reforming, shift conversion, purification, and compression and most importantly - carbon dioxide capture.
- Safety hazards that are present on a blue hydrogen plant and where they are located.
- Safeguards that are in place to protect plant personnel, ie practices and procedures, training, supervision, safety hazard information, safety signage, PPE, alarm systems and lastly the permit to work system.

Student profile
- All ABB Stakeholders (Customers, Universities, Partners etc)

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

- Describe the function of the unit operations and their key controls.
- Discuss the reasons for removal of contaminants.
- Define the chemical reactions that take place.
- Explain the differences between absorption and adsorption.
- Identify the location of principal items of equipment.