TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000099

RPCH004 - Gas Valorization

This course provides a technical and economic information regarding the various options for valorizing gas.



Learn from the Best in the Business!

Course overview

Intermediate level

Why take this course

This course provides a technical and economic information regarding the various options for valorizing gas.

Who it is for and how it helps

Professionals interested in technical information about the different ways to valorize gas.

What you will learn

- Grasp the essence of gas markets, including natural gas and syngas (CO + H2)
- Understand the importance of syngas: production modes and valorization channels
- Learn about the various technologies and their conditions of implementation
- Learn about the latest projects under consideration

Curriculum

Modules 01–04

01 Natural Gas

- Natural gas reserves, conventional or non-conventional.
- Production, consumption and trade, utilization of natural gas worldwide.
- Field treatment, production and by-products (ethane, LPG's, condensates).
- Different ways for gas transportation: pipelines, LNG shiping, etc
- Quality specifications for commercial natural gas.
- Valorization of natural gas: as fuel (domestic or industrial uses), generation of other energy types (electrical, cogeneration), car-fuel (CNG, GTL), chemical valorization.

02 Syngas Production

- Composition and feedstocks (natural gas, hydrocarbons, coal).
- Different modes of syngas production: steam reforming, partial oxidation (POx), autothermal reforming.
- Gas production from biomass: advantages, yields, constraints. Example of a biorefinery.

03 Syngas Valorization

- Maximization of hydrogen production in the refineries through the shift reaction.
- Chemical synthesis: production of alcohol like Methanol, Ammonia and other chemical compounds.
- GTL Complex (Gas-To-Liquid): production of liquid hydrocarbons from gas through Fischer Tropsch reaction.
- Coal gasification.
- Electrical energy production, steam and hydrogen for refining industry: IGCC (Integrated Gasification Combined Cycle).

04 Economic Aspects Of Gas Valorization

- Investment (Capex), operating costs (Opex), costs for raw materials.
- Marketing advantages, environment issues.
- Example: comparison of GTL with LNG.
- Strategies of different actors: production countries of natural gas, licensers, oil or gas trusts, engineering companies.

Participation and contacts

Joining the programme

Contact the Academy and quote course code 000099 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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