

## Underlying Principles of a Combined Gas and Fuel Cycle

### TRAINING OBJECTIVE

Understand the functioning of a combined cycle and the various parts that make it up.

**Length of the course:** 4 days

### PEDAGOGY

- Theoretical and practical training on the clients' installations
- Use of videos and industrial examples
- Individual testing of knowledge at the end of the course

### TRAINING PROGRAM

- The presentation and the characteristics of a combined cycle
- The major economic balances for a combined cycle
- The simplified flow diagram of a combined cycle
- Identifying key materials (KKS and ECS)
- The operating principles and technology of the main equipment involved (GT, HRSG, ST, wet tower, cooling system, auxiliary circuits, etc.)
- Normal values for operating parameters
- The two thermodynamic cycles for a combined cycle
- The various transformations of energy present in a combined cycle
- Variation in performance and efficiency of the unit and its main components
- The different start-up and shutdown and behaviour of key equipment
- Operating principles
- Electricity production / consumption balance
- Environmental constraints subject to different operations of the unit
- The risks of failure of the major components
- Maintenance principles