

## Thermodynamic Cycles

### Combustion and Vapor Turbine

#### TRAINING OBJECTIVE

Understand the thermodynamic principals and functions (air/smoke and water/steam) necessary for the operation of a combined cycle

**Length of the course:** 5 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

- Combined cycle: thermodynamic
- The principles of thermodynamics
- Main thermodynamic units and their uses
- Thermodynamics in a combined cycle
- The T.S and Mollier diagrams for water and steam
- The psychometric charts and T.S for air
- The operation of the equipment constituting the thermodynamic cycle of a combined cycle
- The energies of the transformation process
- The different values of pressure, temperature and flow of air / smoke operation in diagram form
- Changing parameters during transient phases
- Pressure readings, temperature and water hardness in the different exchangers of the thermodynamic cycle according to diagrams
- The power of the CT and compressor
- The power of the exchangers
- The power of ST
- The efficiency of a combined cycle
- Check the drift of the installation by monitoring the thermodynamic parameters
- Heritage preservation through the optimization of thermodynamic parameters