

## Fossil-fired Power Plant Combustion Equipment Technology

### TRAINING OBJECTIVE

Understand the physical and chemical principles of combustion in a fossil-fired fuel-oil, coal and biomass-fired power station.

Understand the working and technology of all of the boiler's parts (combustion chamber and heat exchanger).

### 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

**Length of the course:** 5 days

### TRAINING PROGRAM

- The principles of the combustion
- The different types of fuel, their advantages and disadvantages
- Fuel preparation (crushers, heating station, drying, filtration, etc.)
- Treatment of combustion residue (removal of slag, ash management, etc.)
- The different types and operation of combustion chambers and their technologies
- The technology of burners and heating type
- The combustion chemistry
- The redox combustion
- The upper and lower heating value
- The combustive power
- The fumigant power
- The behaviour of the boiler
- The management of excess air
- The different heat transfers (convection, radiation and conduction)
- The optimization of process parameters
- The various exchangers and their technologies
- The power and performance of the exchangers
- Maintenance and cleaning of the boiler
- The main reasons for boiler failure
- Changing parameters during transient phases
- Smoke treatment
- The monitoring of process parameters
- Preservation facilities by optimizing process parameters