KNOWLEDGE
For Training

1. Course Details:

Course Code : ICPE-004
Course Title : Boiler Operation Control
Course Duration : 5 Days

2. Course Overview:

- Boiler is a foundation component of modern power plant as well as in any process and petrochemical plant. Modern boiler must produce steam in an efficient and safe manner with the lowest operational cost that is practical. The safety of steam production and boiler operation presents important element in the overall steam production management. Boiler operation must be in an environmentally acceptable way, including the aspects of combustion, but also chemical water treatment and other safety considerations.

3. Learning Outcomes:

- Recognize and understand typical boiler control diagrams and their design intentions.
- Contribute to the setting up and tuning of boiler control loops.
- Boiler feed water control
- Flue gas analysis and fuel combustion trimming controls
- Importance of boiler safety control
- Explore advanced control strategies for improved boiler plant efficiency
- Furnace draft measurement and control
- Main steam and reheat steam temperature control

4. Course Contents:

- Hazards of boiler operations
- The main control functions in boilers and furnaces
- Principles of sensors and transmitters with examples for boilers
- closed loop control principles including feedback, feedforward, ratio and limiting.
- Control system hardware and software tools.
- Safety instrumented controls
- Instrumentation diagrams
- Distributed control systems and the separation of safety systems
- Characteristic responses of drum level
- Measurement problems and practices
- Pressure measurement methods and the pressure profile Temperature control and the impact of dew point Protection against implosion

- Stoichiometric air and excess air requirements
- Firing rate controls and cross limiters for improving dynamic response Methods for measurements of boiler efficiency
- Safety and performance requirements of pulverizes, burners and igniters. Furnace safety standards and regulations
- Start-up protection and sequencing
- Furnace supervisory controls and shutdown systems
- De-super heater controls

5. Our Methodology:

- Make coaching and monitoring innovative and using modern
- Media training also using on the go training by using interactive means and focusing on
- The exercises, practical applications and real situations study.
- Live delivery method, instructor-led training.
- Experienced consultant, trainers, and professional.
- Qualified trainer with high-level experience

6. Attendance Reports:

- Send daily attendance reports to trainingdep
- Send full attendance report to training dep. by the end of thecourse
- Attend 100 % from the course days also providedaily
- Issue attendance certificate for participant who attend minimum 80% from the course duration

7. Pre/Post Reports:

- Pre- assessment before starting training.
- Post assessment after finish training
- Full report for the deferent between Pre-& Post assessment

8. Who Should Attend?

- Boiler plant operators
- Repairers and installers
- Control system engineers
- Instrumentation engineers and technicians

- Boiler plant commissioning engineers, operation, maintenance, inspection and repair specialists
- Mechanical engineers and technicians