

Course Overview:

The course is primarily intended for experienced Operations & Maintenance working in combined cycle power plants, and it should also be of interest to engineers and managers involved in new project development. This 5 days course gives attendees a comprehensive and an in-depth survey of a broad range of topics relating to the design, operation and maintenance of the HRSG and associated steam cycle systems.

Course Objective:

- Gain a comprehensive understanding of the key systems and processes involved in the combined cycle power plant.
- Appreciate the key constraints and tradeoffs involved in designing an HRSG.
- Learn the water chemistry treatment options available for HRSG unit, their respective advantages and disadvantages.
- Get access to applied theory in real life situations through a series of worked case histories.

Course Outline:

1. HEAT EXCHANGE FUNDAMENTALS OF HEAT & FLUID FLOW
2. THERMODYNAMICS & HEAT TRANSFER REVIEW
3. NATURAL AND FORCED CIRCULATION
4. SUPPLEMENTAL FIRING
5. BASIC CONSTRUCTION DETAILS
6. HRSG DESIGN VARIATIONS
7. TYPES OF HRSG
8. VARIATIONS
9. FLOW PATH DESCRIPTIONS
10. WATERSIDE FLOW PATHS
11. GAS SIDE FLOW PATHS
12. FEEDWATER: PREHEATERS, RECIRCULATION,
13. DEAERATORS,
14. ECONOMIZERS: LOW, HIGH PRESSURE
15. EVAPORATORS & DRUMS
16. RELIEF AND SAFETY VALVES
17. SUPERHEATERS, REHEATERS, ATTEMPERATORS
18. DRAINS, VENTS
19. STANDARD MAINTENANCE ACTIVITIES
20. DAMAGE & DEGRADATION MECHANISMS
21. OPERATIONS AND MAINTENANCE

Who Should Attend:

1. Electrical, mechanical, and chemical Engineers.
2. Senior technicians who work in the electrical control and power utilities.
3. Technicians who would like to refresh their knowledge.
4. Mechanical and chemical Engineers who are interested in control subjects.

Training Language:

EN / AR

Training Methodology:

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation