

MECHANICAL COURSES

STEAM TURBINE EFFICIENCY (M32A)

OBJECTIVE:

This seminar provides knowledge and skills in increasing the efficiency of a steam plant.

WHO SHOULD ATTEND?

This seminar is recommended for anyone involved in steam turbine.

COURSE CONTENT:

1. What a Moiller diagram is composed of and how the steam expansion can be represented on it
2. Ideal steam expansion compared to the actual steam expansion
3. Changing main steam conditions on the
4. Moiller diagram and effect on cycle efficiency
5. The concept entropy
6. Using extraction steam for feedwater heating to increase efficiency
7. How desuperheating water spray impacts efficiency
8. Basic properties of steam and water and their reaction to heat
9. How the steam/water cycle can be represented on a temperature entropy diagram
10. Changing main steam and exhaust conditions to a temperature entropy diagram and the effect on cycle deficiency

Duration: 5 Days

| Date: | Venue: | Cost: |
|--------------|--------|----------|
| Feb 28-Mar 4 | Dammam | SR7,000 |
| Jun 6-10 | Riyadh | SR 8,000 |
| Sep 26-30 | Dammam | SR7,000 |

STEAM TURBINE OPERATION and PROTECTION (M47A)

OBJECTIVE:

This course provides knowledge and skills in operation, maintenance protection and troubleshooting of Steam Turbines.

WHO SHOULD ATTEND?

This course is recommended for those who are involved with the operation and protection of steam turbines.

COURSE CONTENT:

- Steam Turbine-An Introduction
- Power Plant Efficiency
- Construction and Principles of Operation
- Turbine Valves and Support System
- Turbine Control Valves
- Turbine Protection Part I
- Lubrication Oil Protection System

PRACTICAL TASKS:

- In ISCOA workshop
- Removing the blades coating for cracks inspection.
- Using dye penetrate and developer for blades crack inspection
- Grinding cleaning, and measuring blades cracks sizes.
- Blades cracks re-welding.
- Blades reheating treatment
- Blades re coating.

Duration: 5 Days

| Date: | Venue: | Cost: |
|-------------|--------|---------|
| Apr 4 – 8 | Dammam | SR7,000 |
| Aug 1 – 5 | Jubail | SR8,000 |
| Dec 19 – 23 | Dammam | SR7,000 |