

## An LDI Training Course

# Advanced Turbine Operational Issues, Performance and Evaluation

by  
**Rachmat Sudjana, ST.**

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### ***Introduction***

This course provides Engineers and Company Staff, who seeking an in-depth understanding of Turbine Operational Issue, Performance and Evaluation

This will cover the discussion of why it is important to learn this skill?  
Gas turbines are a significant prime mover in industrial plant application.  
For this reason, it is important for the Engineers to understand the principles of operational issues, performance and evaluation of gas turbine.

### ***The Aims***

It is important to understand the basic knowledge of Turbine Operational Issue, Performance and Evaluation to support long maintenance program to keep the equipment availability and reliability in accordance with specified codes and standards.

### ***Course Contents***

- Describe the working principles, components, types, applications, systems,
- Startup & Shutdown procedure
- Regular Gas turbine maintenance
- Describe energy transformation in gas turbine engine
- Describe turbine engine performance and specifications
- Advanced methods of gas turbine maintenance (bore scope – condition monitoring)
- The gas turbine engine
- Basic cycle
- Advantages and disadvantages
- Applications
- Gas turbine engine components

- Radial and axial air compressor
- Combustors and its types
- Turbine and its type
- Gas turbine engine performance and specifications
- Leading particulars
- Compressor characteristics
- Turbine characteristics
- Component losses and matching
- Gas turbine maintenance
- Air inlet filtration
- Compressor blades erosion
- Compressor fouling
- Inspection schedules
- Safety precautions
- Bore-scope inspections
- Cracks testing
- Bearings
- Fuel nozzles
- Condition monitoring instrumentation description
- Application of Standards and Codes
  - ISO 19859:2016 API 619: Gas Turbines Application Requirements
  - ASME PTC 22 – 2023: Gas Turbines

## ***Who Should Attend***

Mechanical Engineers, Electrical Engineers, Operations Engineers, Instrumentation Engineers whom are working in gas turbine operation and maintenance

## **Your Course Leader**

### **Rachmat Sudjana, ST**

**Education:** University of Indonesia, Industrial Engineering AKAMIGAS, Mechanical Engineering

**Qualification:** Instructor for Oil and Gas Industries and Pulp & Paper Mills

**Other Qualifications:** Lecturer and Mentor for Graduate Engineering Trainee –  
Engineering Manager - Senior Staff Pipeline/Facility Engineer –  
Pipeline Material Selection Specialist

He was a retired Oil & Gas Industry practitioner, who is willing to share his knowledge and experience to the next engineer's generation who need them.

He has a lot of experiences in the Oil & Gas Industries domestic and abroad in the World Class Oil Companies, such as working in the oil field in the north edge of Sahara Desert, Africa next the south shore line of the Mediterranean Sea. As soon as he retired, he had a particular assignment as a Company Engineer in Foster Wheeler, Reading, next to London, UK.

He completed the assignment and get a lot more experience after the completion of the project. A long with his engineering tasks, he was also mentored the engineer's new hired in the company to facilitate them for their future to hold more responsibility. He is willing to improve the knowledge by sharing them to others. He also presented some of technical papers in the national and international forums.

## Course Delivery

- This offline (face to face) course is conducted in Bahasa Indonesia
- Training hours are from 08:00 to 16:00 WIB
- Participants will receive course materials
- Participants will receive a certificate after completing the training

## TRAINING CONFIRMATION

For this training we can be carried out with **minimum participant 6 persons.**

**For course registration and more information please email to**

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