

**Course Overview:**

The aim of this course is to be that the participant will be able to:

- Be familiar with safety in process operations
- Define troubleshooting.
- Identify the steps of troubleshooting.
- Develop technical and analytical skills necessary for conducting technical evaluations.
- Be able to apply risk-based methodologies in inspection and maintenance
- Acquire practical tools that can apply on the job

**Course Objective:**

By the end of this course the participant will be able to:

- Be familiar with safety in process operations
- Define troubleshooting.
- Identify the steps of troubleshooting.
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**Course Outline:**

- THE TECHNOLOGY OF MACHINES
- PARTS OF THE MACHINE: CASING, ROTOR, BEARING, COUPLING.
- MACHINERY MOUNTING
- SAFETY IN PROCESS OPERATIONS
- THE NATURE OF PROCESS PROBLEMS AFFECTING PERFORMANCE
- REAL PROCESS CHARACTERISTICS.
- PROCESS CLASSIFICATION.
- MACHINERY MAINTENANCE REQUIREMENTS
- EFFECT OF MAINTENANCE/OPERATIONS STRATEGY
- NOISY MEASUREMENT SIGNALS.
- CLOSED LOOP TESTING AND ANALYSIS.
- TYPICAL TROUBLE
- IMBALANCE
- LOOSENESS
- MISALIGNMENT
- GEAR PROBLEMS
- BEARING PROBLEMS.
- OPERATING ISSUES.
- PROVOCATIVE MAINTENANCE.
- LUBRICATION
- COUPLINGS & ALIGNMENT
- ROTORS AND SHAFTS

**Training Language:**

EN / AR

**Training Methodology:**

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

-PROCESS PLANT OPERATION, INTEGRITY AND RELIABILITY

**Who Should Attend:**

This course is intended for maintenance engineers, supervisory and technical staff working in maintenance related roles, who need either a greater awareness of, or to get more involved in, preventive maintenance activities and the troubleshooting of rotating and reciprocating machines. Because the methods and examples are generic, personnel from all industries will benefit