Training - Rotating Equipment

ROTMACH-EN-P | Face-to-face only | 5 days

This course provides a good knowledge of the performance, technology and operation of rotating machinery

Level
Knowledge

Public
Engineers, supervisors and technicians involved in rotating machinery operation, maintenance or engineering

Objectives
Attendees will be able to implement the following skills:

- recognize the technology of major rotating machines
- specify how they operate
- list the selection criteria of the equipment in relation to its operation and maintenance taking into account costs and security aspects

Pedagogical & technical resources

- Study of actual equipment and mechanical parts in the workshop
- Use of drawings, datasheets, pictures and videos of actual equipment
- Pumping test bench practical works
- Incidents analysis and improvement proposals

Assessment of achievements
Quiz

Prerequisites
No prerequisites are necessary to follow this course

Responsable
IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

PUMPS — 2 days

Different types of pumps, applications in the process industry.
Operating principle and technology of positive displacement pumps.
Performance curves of a centrifugal pump: head, efficiency, shaft power, NPSH.
Technology of centrifugal pumps, different layouts.
Mechanical seals: different arrangements, related auxiliary systems.
Operating limits: cavitation, hammering, priming issues, parallel run, operating range.
Start-up and operation monitoring.
Troubleshooting and common failures. Safety and prevention.

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RECIPROCATING & ROTARY POSITIVE DISPLACEMENT COMPRESSORS — 1 day

Different types of positive displacement compressors.
Reciprocating compressor architecture: number of stages, cylinders, overall layout, standard applications.
Technology of main components and auxiliaries.
Influence of process conditions on compressor performance: suction or discharge pressure, suction temperature, gas composition.
Flow control, specific safety devices. Start-up procedures. Troubleshooting.

CENTRIFUGAL & AXIAL COMPRESSORS — 1 day

Description of different types of centrifugal and axial compressors: horizontal/radial split casing centrifugal compressors, axial compressors, integrally geared compressors.
Technology of main components and auxiliaries.
Compression mechanism through a compressor stage. Performance curves vs operating conditions.
Operation limits: low and high speed limits, stonewall, surge, typical anti surge protection systems.
Flow control: throttling valve, rotation speed control, inlet guide vanes. Specific precautions for start-up.
Troubleshooting. Safety.

TURBINES — 1 day

Description of different types of turbines, typical applications.
Steam turbines, gas turbines, turbo-expanders.
Operating principle, classification and technology: exhaust conditions, expansion mechanism through a turbine stage.
Operation: start-up and performance monitoring. Flow control, safety devices.

Sessions

Pau - From 10/19/2026 to 10/23/2026 — **4240 €/HT**

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com

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